

JULY-1983

CR 175067

TURBOFAN AFT DUCT SUPPRESSOR STUDY

CONTRACTOR'S DATA REPORT OF MODE PROBE SIGNAL DATA

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Douglas Aircraft Company
Long Beach, California

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Final Report
NASA Contract No. NAS3-22766
NASA Lewis Research Center

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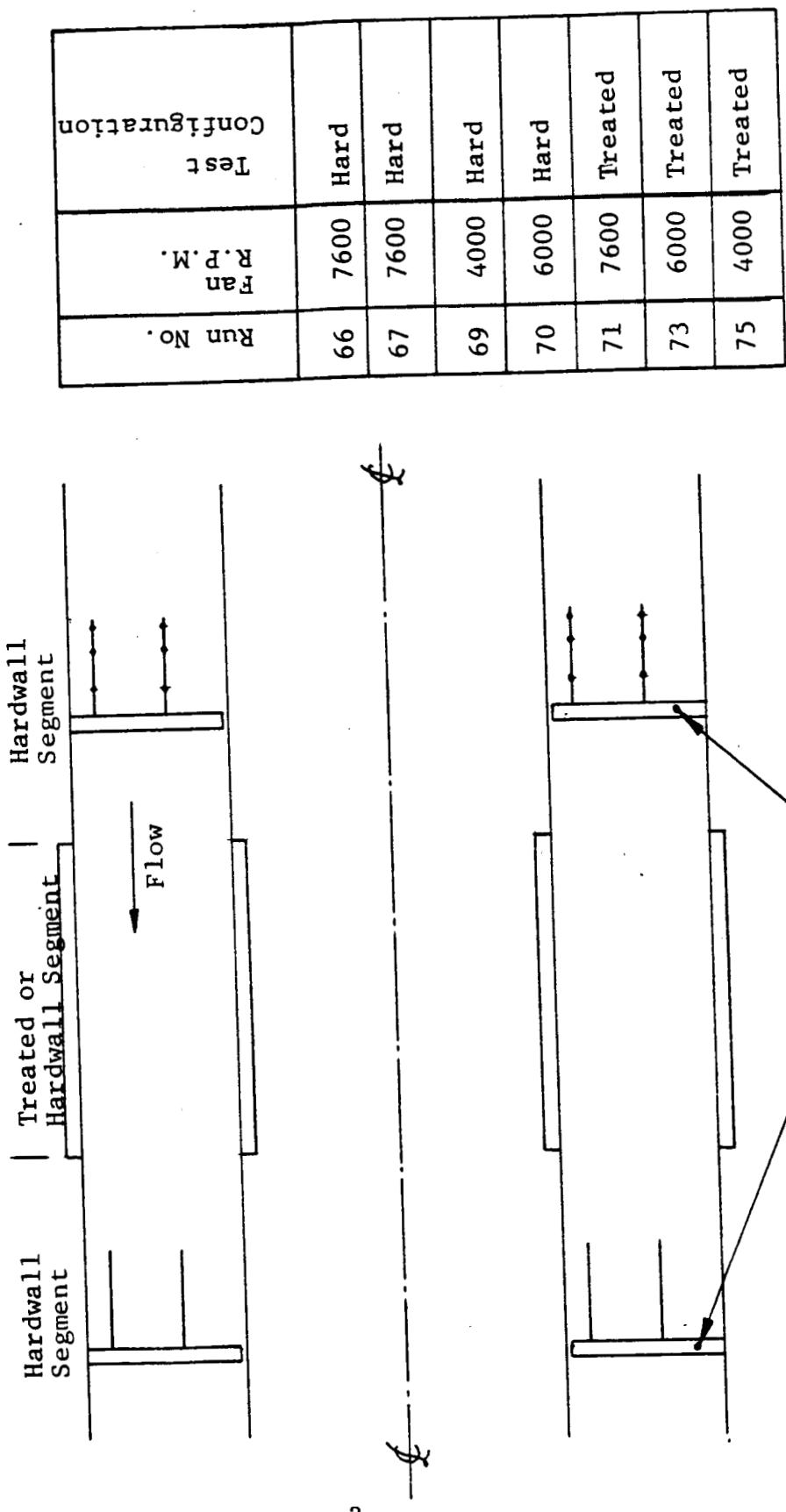
INTRODUCTION

This report contains the amplitude and phase data of the acoustic signals sensed by the transducers of the two mode probes employed in the measurement of the acoustic modes in the straight annular exhaust duct used in the experimental part of the Aft Duct Suppressor Study.

Each mode probe consisted of an array of 12 transducers sensing the acoustic field at three axial positions and four radial positions. As shown in Figure 1, data at two radial locations was taken at one circumferential location and at the other two radial locations was obtained at 180° from that location. Measurements were taken at 18° intervals. In this way acoustic field was measured at 20 circumferential, 3 axial and four radial locations in the annulus of the duct. During the angular traversing of the probes, the acoustic field in the duct was assumed to be stationary.

Amplitude and phase data is tabulated against the transducer's spatial location and number. The axial locations are with respect to a reference location on the rotor hub and are quoted in inches. The radial locations are in terms of (r/r_2) where r_2 , the radius of the outer wall is 10 inches. The treated segment used in runs 71, 73, and 75 is located between 34.85 inch and 44.85 inch (effective length of 10 inches) from the reference location.

Figure 1. Schematic Diagram Showing a Straight Segmented Annular Duct and Mode Probes in the Upstream and Downstream Hardwall Segments.



TEMP13 T=00004 IS ON CR AA USING 00072 BLKS R=0000

0001	PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM				PAGE	
0002						
0003						
0004	RUN # 66	DATE 8/27/82	MEASUREMENT LOCATION: UPSTREAM			
0005						
0006	CONFIGURATION: HARDWALL		FAN SPEED: 7600 rpm			
0007						
0008	TEMPERATURES (deg. F):					
0009	INLET (DRY)	90				
0010	CHAMBER (DRY)	90				
0011	CHAMBER (WET)	78				
0012						DATA REDUCTION: FROM TAPE
0013						
0014	KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0015	-----	-----	-----	-----	-----	-----
0016	1	27.161	.925	0	92.975	13.94
0017	2	29.036	.925	0	30.611	44.41
0018	3	30.161	.925	0	29.742	181.58
0019	4	27.161	.700	0	23.930	29.34
0020	5	29.036	.700	0	14.466	42.64
0021	6	30.161	.700	0	19.724	134.35
0022	7	27.161	.800	0	51.030	-220.40
0023	8	29.036	.800	0	16.046	.65
0024	9	30.161	.800	0	8.760	320.54
0025	10	27.161	.575	0	.100	90.00
0026	11	29.036	.575	0	37.436	52.06
0027	12	30.161	.575	0	21.722	85.08
0028	1	27.161	.925	18	28.428	268.05
0029	2	29.036	.925	18	81.768	220.19
0030	3	30.161	.925	18	123.467	219.29
0031	4	27.161	.700	18	27.219	208.36
0032	5	29.036	.700	18	55.900	209.42
0033	6	30.161	.700	18	66.122	178.01
0034	7	27.161	.800	18	20.620	-48.20
0035	8	29.036	.800	18	83.774	242.57
0036	9	30.161	.800	18	96.426	225.80
0037	10	27.161	.575	18	18.327	242.93
0038	11	29.036	.575	18	25.952	258.60
0039	12	30.161	.575	18	19.289	215.49
0040	1	27.161	.925	36	28.679	261.85
0041	2	29.036	.925	36	62.359	-43.78
0042	3	30.161	.925	36	110.486	-8.92
0043	4	27.161	.700	36	38.312	206.74
0044	5	29.036	.700	36	25.659	-42.01
0045	6	30.161	.700	36	28.757	39.78
0046	7	27.161	.800	36	67.596	15.52
0047	8	29.036	.800	36	35.388	340.59
0048	9	30.161	.800	36	27.267	388.91
0049	10	27.161	.575	36	17.888	236.45
0050	11	29.036	.575	36	17.658	248.17
0051	12	30.161	.575	36	4.377	13.59
0052	1	27.161	.925	54	33.052	88.96
0053	2	29.036	.925	54	50.716	97.40
0054	3	30.161	.925	54	71.153	91.17
0055	4	27.161	.700	54	24.685	115.60
0056	5	29.036	.700	54	36.277	95.46

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0060

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RUN # 66

DATE 8/27/82

MEASUREMENT LOCATION: UPSTREAM

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KULITE NO.	KULITE (in.)	POSITION r/r_2	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
6	30.161	.700	54	53.629	86.12
7	27.161	.800	54	30.419	-181.06
8	29.036	.800	54	42.285	120.12
9	30.161	.800	54	54.249	108.61
10	27.161	.575	54	29.502	121.55
11	29.036	.575	54	25.795	169.18
12	30.161	.575	54	34.615	126.53
1	27.161	.925	72	40.528	190.88
2	29.036	.925	72	46.928	211.84
3	30.161	.925	72	85.879	220.12
4	27.161	.700	72	16.554	184.79
5	29.036	.700	72	22.520	194.77
6	30.161	.700	72	7.991	228.05
7	27.161	.800	72	23.417	-110.51
8	29.036	.800	72	49.560	205.65
9	30.161	.800	72	44.386	213.21
10	27.161	.575	72	17.258	126.82
11	29.036	.575	72	8.929	123.94
12	30.161	.575	72	17.031	4.42
1	27.161	.925	90	52.082	274.52
2	29.036	.925	90	57.902	308.56
3	30.161	.925	90	66.070	367.76
4	27.161	.700	90	.100	90.00
5	29.036	.700	90	17.429	308.88
6	30.161	.700	90	53.239	382.67
7	27.161	.800	90	23.903	-297.62
8	29.036	.800	90	38.515	-47.27
9	30.161	.800	90	48.156	-18.66
10	27.161	.575	90	42.042	113.10
11	29.036	.575	90	22.465	358.30
12	30.161	.575	90	40.161	367.41
1	27.161	.925	108	7.948	42.01
2	29.036	.925	108	37.075	157.85
3	30.161	.925	108	97.533	148.42
4	27.161	.700	108	38.218	93.29
5	29.036	.700	108	35.856	122.55
6	30.161	.700	108	28.662	116.95
7	27.161	.800	108	15.847	-164.48
8	29.036	.800	108	44.840	139.98
9	30.161	.800	108	60.379	130.34
10	27.161	.575	108	55.566	90.44
11	29.036	.575	108	41.042	89.37
12	30.161	.575	108	18.940	67.98
1	27.161	.925	126	35.691	215.01
2	29.036	.925	126	42.313	232.43
3	30.161	.925	126	82.107	251.63
4	27.161	.700	126	20.125	95.57
5	29.036	.700	126	25.031	305.68
6	30.161	.700	126	38.392	272.26
7	27.161	.800	126	29.856	-103.83
8	29.036	.800	126	41.019	256.04
9	30.161	.800	126	48.994	248.40

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0123

RUN # 66

DATE 8/27/82

MEASUREMENT LOCATION: UPSTREAM

0124

0125

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0128

KULITE NO.	KULITE NO.	AXIAL (in.)	RADIAL (r/r_2)	POSITION (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0129	10	27.161	.575	126	62.896	81.53
0130	11	29.036	.575	126	17.530	9.70
0131	12	30.161	.575	126	38.106	-20.88
0132	1	27.161	.925	144	30.580	61.50
0133	2	29.036	.925	144	41.415	-3.99
0134	3	30.161	.925	144	115.734	-11.23
0135	4	27.161	.700	144	49.767	19.84
0136	5	29.036	.700	144	63.401	-23.03
0137	6	30.161	.700	144	73.205	-19.90
0138	7	27.161	.800	144	36.286	74.17
0139	8	29.036	.800	144	59.283	356.94
0140	9	30.161	.800	144	59.665	-13.77
0141	10	27.161	.575	144	84.974	25.80
0142	11	29.036	.575	144	78.481	354.72
0143	12	30.161	.575	144	68.915	344.28
0144	1	27.161	.925	162	43.421	45.01
0145	2	29.036	.925	162	47.257	133.17
0146	3	30.161	.925	162	134.632	161.59
0147	4	27.161	.700	162	25.550	343.26
0148	5	29.036	.700	162	13.329	297.09
0149	6	30.161	.700	162	32.201	194.95
0150	7	27.161	.800	162	26.471	-233.41
0151	8	29.036	.800	162	33.169	148.33
0152	9	30.161	.800	162	60.961	161.25
0153	10	27.161	.575	162	65.901	348.78
0154	11	29.036	.575	162	58.158	316.17
0155	12	30.161	.575	162	38.078	279.26
0156	1	27.161	.925	180	60.843	216.57
0157	2	29.036	.925	180	7.238	298.35
0158	3	30.161	.925	180	23.639	351.13
0159	4	27.161	.700	180	29.944	316.54
0160	5	29.036	.700	180	30.552	300.09
0161	6	30.161	.700	180	41.140	310.77
0162	7	27.161	.800	180	53.608	-13.74
0163	8	29.036	.800	180	58.971	264.98
0164	9	30.161	.800	180	60.285	248.07
0165	10	27.161	.575	180	53.440	312.58
0166	11	29.036	.575	180	84.553	292.31
0167	12	30.161	.575	180	69.105	260.34
0168	1	27.161	.925	198	38.041	59.21
0169	2	29.036	.925	198	59.489	72.36
0170	3	30.161	.925	198	104.509	71.53
0171	4	27.161	.700	198	46.269	-15.45
0172	5	29.036	.700	198	40.776	-8.40
0173	6	30.161	.700	198	25.387	-12.04
0174	7	27.161	.800	198	26.896	45.34
0175	8	29.036	.800	198	42.088	383.36
0176	9	30.161	.800	198	38.562	50.70
0177	10	27.161	.575	198	47.507	-45.49
0178	11	29.036	.575	198	48.671	273.17
0179	12	30.161	.575	198	34.677	254.59
0180	1	27.161	.925	216	82.104	148.80

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RUN # 66 DATE 8/27/82 MEASUREMENT LOCATION: UPSTREAM

0185

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KULITE NO.	KULITE (in.)	POSITION (r/r ₂)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0190	2	.925	46.451	154.46
0191	3	.925	75.389	152.97
0192	4	.700	22.153	171.11
0193	5	.700	26.889	218.86
0194	6	.700	41.819	221.71
0195	7	.800	42.563	-126.61
0196	8	.800	40.822	151.77
0197	9	.800	64.592	143.31
0198	10	.575	35.947	274.18
0199	11	.575	51.475	239.34
0200	12	.575	66.046	196.37
0201	1	.925	76.522	252.94
0202	2	.925	32.375	302.28
0203	3	.925	47.028	330.82
0204	4	.700	48.913	271.83
0205	5	.700	32.341	277.81
0206	6	.700	12.187	301.51
0207	7	.800	31.089	-39.74
0208	8	.800	57.383	248.47
0209	9	.800	50.870	258.40
0210	10	.575	51.308	289.58
0211	11	.575	53.542	238.22
0212	12	.575	36.864	238.01
0213	1	.925	36.355	5.27
0214	2	.925	46.003	52.30
0215	3	.925	83.740	63.71
0216	4	.700	5.095	276.85
0217	5	.700	20.102	57.71
0218	6	.700	38.246	62.70
0219	7	.800	10.319	-1.99
0220	8	.800	52.475	38.06
0221	9	.800	56.659	52.33
0222	10	.575	11.530	249.58
0223	11	.575	7.182	188.23
0224	12	.575	9.573	66.62
0225	1	.925	46.161	73.46
0226	2	.925	31.047	111.71
0227	3	.925	25.092	172.48
0228	4	.700	17.272	110.63
0229	5	.700	39.526	118.19
0230	6	.700	36.057	164.44
0231	7	.800	59.382	-171.21
0232	8	.800	49.535	119.34
0233	9	.800	34.736	124.87
0234	10	.575	35.891	135.85
0235	11	.575	62.682	159.82
0236	12	.575	33.721	132.79
0237	1	.925	38.093	274.93
0238	2	.925	58.758	329.09
0239	3	.925	129.662	332.85
0240	4	.700	15.638	233.10
0241	5	.700	27.682	237.95

0242

0243

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

0244

0245

RUN # 66

DATE 8/27/82

MEASUREMENT LOCATION: UPSTREAM

0246

0247

KULITE NO.	KULITE NO.	AXIAL (in.)	RADIAL (r/r_2)	POSITION (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0251	6	30.161	.700	288	31.631	285.02
0252	7	27.161	.800	288	14.939	-24.57
0253	8	29.036	.800	288	47.851	306.72
0254	9	30.161	.800	288	73.023	315.41
0255	10	27.161	.575	288	20.266	200.69
0256	11	29.036	.575	288	40.218	183.79
0257	12	30.161	.575	288	37.612	203.14
0258	1	27.161	.925	306	42.865	364.95
0259	2	29.036	.925	306	32.392	76.78
0260	3	30.161	.925	306	67.924	84.03
0261	4	27.161	.700	306	8.734	280.81
0262	5	29.036	.700	306	34.260	130.37
0263	6	30.161	.700	306	40.186	143.90
0264	7	27.161	.800	306	11.361	76.35
0265	8	29.036	.800	306	38.969	89.56
0266	9	30.161	.800	306	58.581	81.23
0267	10	27.161	.575	306	27.751	227.31
0268	11	29.036	.575	306	48.843	155.82
0269	12	30.161	.575	306	43.872	171.49
0270	1	27.161	.925	324	76.046	164.80
0271	2	29.036	.925	324	45.413	175.21
0272	3	30.161	.925	324	80.537	185.65
0273	4	27.161	.700	324	34.486	198.60
0274	5	29.036	.700	324	40.630	162.74
0275	6	30.161	.700	324	43.372	165.84
0276	7	27.161	.800	324	43.501	-122.65
0277	8	29.036	.800	324	59.565	149.67
0278	9	30.161	.800	324	64.302	151.10
0279	10	27.161	.575	324	56.266	232.69
0280	11	29.036	.575	324	23.238	169.64
0281	12	30.161	.575	324	27.573	154.75
0282	1	27.161	.925	342	6.676	358.31
0283	2	29.036	.925	342	60.378	319.90
0284	3	30.161	.925	342	131.422	325.69
0285	4	27.161	.700	342	21.935	269.52
0286	5	29.036	.700	342	58.055	314.51
0287	6	30.161	.700	342	52.636	344.65
0288	7	27.161	.800	342	25.735	-21.32
0289	8	29.036	.800	342	67.039	300.51
0290	9	30.161	.800	342	74.618	297.49
0291	10	27.161	.575	342	41.260	227.25
0292	11	29.036	.575	342	26.569	328.06
0293	12	30.161	.575	342	29.011	380.90

TEMP13 T=00004 IS ON CR AA USING 00072 BLKS R=0000

0001	PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM					PAGE
0002						
0003						
0004	RUN # 66	DATE 8/27/82	MEASUREMENT LOCATION: DOWNSTREAM			
0005						
0006	CONFIGURATION: HARDWALL		FAN SPEED: 7600 rpm			
0007						
0008	TEMPERATURES (deg. F):					
0009	INLET (DRY)	:	90			
0010	CHAMBER (DRY)	:	90			
0011	CHAMBER (WET)	:	78			
0012						REDUCTION: FROM TAPE
0013						
0014	KULITE	KULITE	POSITION	AMPLITUDE	PHASE	
0015	NO.	AXIAL	RADIAL	(Voltsx10)	(deg.)	
0016		(in.)	(r/r_2)			
0017	-----	-----	-----	-----	-----	-----
0018	13	56.161	.925	0	39.527	235.80
0019	14	58.036	.925	0	2.681	145.32
0020	15	59.161	.925	0	6.978	250.05
0021	16	56.161	.700	0	4.748	313.98
0022	17	58.036	.700	0	18.875	103.00
0023	18	59.161	.700	0	36.963	126.48
0024	19	56.161	.800	0	30.289	76.53
0025	20	58.036	.800	0	56.751	82.98
0026	21	59.161	.800	0	53.724	95.76
0027	22	56.161	.575	0	30.283	238.48
0028	23	58.036	.575	0	20.271	194.33
0029	24	59.161	.575	0	13.028	229.95
0030	13	56.161	.925	18	20.970	344.86
0031	14	58.036	.925	18	.100	90.00
0032	15	59.161	.925	18	11.947	220.64
0033	16	56.161	.700	18	22.715	125.26
0034	17	58.036	.700	18	46.290	181.29
0035	18	59.161	.700	18	76.088	186.08
0036	19	56.161	.800	18	11.762	107.20
0037	20	58.036	.800	18	38.856	225.19
0038	21	59.161	.800	18	59.454	243.07
0039	22	56.161	.575	18	27.287	258.71
0040	23	58.036	.575	18	53.296	210.47
0041	24	59.161	.575	18	23.334	224.99
0042	13	56.161	.925	36	41.603	136.68
0043	14	58.036	.925	36	.100	90.00
0044	15	59.161	.925	36	19.296	173.40
0045	16	56.161	.700	36	15.141	261.16
0046	17	58.036	.700	36	27.916	284.56
0047	18	59.161	.700	36	32.552	319.55
0048	19	56.161	.800	36	35.221	299.86
0049	20	58.036	.800	36	54.439	315.98
0050	21	59.161	.800	36	38.080	340.82
0051	22	56.161	.575	36	42.626	295.89
0052	23	58.036	.575	36	21.466	180.44
0053	24	59.161	.575	36	11.372	267.50
0054	13	56.161	.925	54	31.145	256.92
0055	14	58.036	.925	54	.100	90.00
0056	15	59.161	.925	54	19.091	348.01
0057	16	56.161	.700	54	36.368	282.06
0058	17	58.036	.700	54	5.475	354.76

0059

0060

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PAGE

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0062

RUN # 66

DATE 8/27/82

MEASUREMENT LOCATION: DOWNSTREAM

0063

0064

KULITE

0065

NO.

KULITE

0066

AXIAL
(in.)

0067

POSITION

RADIAL
(r/r₂)CIRCUM.
(deg.)AMPLITUDE
(Voltsx10)PHASE
(deg.)

0068	18	59.161	.700	54	50.989	107.30
0069	19	56.161	.800	54	.100	90.00
0070	20	58.036	.800	54	12.903	117.82
0071	21	59.161	.800	54	49.195	124.93
0072	22	56.161	.575	54	27.223	304.02
0073	23	58.036	.575	54	42.253	149.70
0074	24	59.161	.575	54	4.276	210.37
0075	13	56.161	.925	72	47.530	17.72
0076	14	58.036	.925	72	.100	90.00
0077	15	59.161	.925	72	8.226	224.63
0078	16	56.161	.700	72	7.476	95.36
0079	17	58.036	.700	72	41.368	193.94
0080	18	59.161	.700	72	43.225	220.06
0081	19	56.161	.800	72	6.904	65.86
0082	20	58.036	.800	72	57.982	193.75
0083	21	59.161	.800	72	67.318	209.25
0084	22	56.161	.575	72	16.457	271.36
0085	23	58.036	.575	72	14.312	172.23
0086	24	59.161	.575	72	9.232	216.75
0087	13	56.161	.925	90	34.114	125.73
0088	14	58.036	.925	90	.100	90.00
0089	15	59.161	.925	90	42.396	169.69
0090	16	56.161	.700	90	7.506	349.40
0091	17	58.036	.700	90	21.165	273.50
0092	18	59.161	.700	90	32.514	316.29
0093	19	56.161	.800	90	39.811	352.16
0094	20	58.036	.800	90	39.882	305.80
0095	21	59.161	.800	90	52.838	306.92
0096	22	56.161	.575	90	10.501	169.59
0097	23	58.036	.575	90	8.002	254.96
0098	24	59.161	.575	90	9.603	219.21
0100	13	56.161	.925	108	24.880	270.87
0101	14	58.036	.925	108	.100	90.00
0102	15	59.161	.925	108	15.047	118.40
0103	16	56.161	.700	108	15.291	299.26
0104	17	58.036	.700	108	25.107	140.77
0105	18	59.161	.700	108	45.684	147.92
0106	19	56.161	.800	108	14.893	294.12
0107	20	58.036	.800	108	22.623	114.88
0108	21	59.161	.800	108	46.179	119.12
0109	22	56.161	.575	108	36.609	199.10
0110	23	58.036	.575	108	26.635	141.21
0111	24	59.161	.575	108	16.252	181.00
0112	13	56.161	.925	126	31.426	40.30
0113	14	58.036	.925	126	.100	90.00
0114	15	59.161	.925	126	4.738	312.01
0115	16	56.161	.700	126	42.965	169.10
0116	17	58.036	.700	126	44.545	190.63
0117	18	59.161	.700	126	24.759	230.60
0118	19	56.161	.800	126	21.426	172.32
0119	20	58.036	.800	126	51.538	195.66
	21	59.161	.800	126	46.619	212.95

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0121

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

0122

0123

RUN # 66

DATE 8/27/82

MEASUREMENT LOCATION: DOWNSTREAM

0124

0125

KULITE NO.	KULITE NO.	AXIAL (in.)	RADIAL (r/r ₂)	POSITION (deg.)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0129	22	56.161	.575	126	45.113	175.16	
0130	23	58.036	.575	126	15.995	141.03	
0131	24	59.161	.575	126	21.869	177.55	
0132	13	56.161	.925	144	34.740	135.54	
0133	14	58.036	.925	144	.100	90.00	
0134	15	59.161	.925	144	16.229	178.46	
0135	16	56.161	.700	144	.100	90.00	
0136	17	58.036	.700	144	42.697	352.24	
0137	18	59.161	.700	144	66.861	18.25	
0138	19	56.161	.800	144	20.274	69.65	
0139	20	58.036	.800	144	45.923	16.69	
0140	21	59.161	.800	144	62.982	361.90	
0141	22	56.161	.575	144	33.300	126.91	
0142	23	58.036	.575	144	48.630	42.67	
0143	24	59.161	.575	144	19.486	74.62	
0144	13	56.161	.925	162	23.701	289.37	
0145	14	58.036	.925	162	.100	90.00	
0146	15	59.161	.925	162	16.562	64.05	
0147	16	56.161	.700	162	24.273	365.37	
0148	17	58.036	.700	162	24.915	395.56	
0149	18	59.161	.700	162	18.048	141.49	
0150	19	56.161	.800	162	25.046	310.98	
0151	20	58.036	.800	162	29.614	372.01	
0152	21	59.161	.800	162	26.745	124.22	
0153	22	56.161	.575	162	26.501	75.63	
0154	23	58.036	.575	162	33.428	35.33	
0155	24	59.161	.575	162	20.488	41.30	
0156	13	56.161	.925	180	31.501	88.81	
0157	14	58.036	.925	180	.100	90.00	
0158	15	59.161	.925	180	38.017	91.89	
0159	16	56.161	.700	180	38.064	257.29	
0160	17	58.036	.700	180	38.781	278.48	
0161	18	59.161	.700	180	50.665	301.26	
0162	19	56.161	.800	180	19.898	292.07	
0163	20	58.036	.800	180	64.508	269.56	
0164	21	59.161	.800	180	75.852	260.69	
0165	22	56.161	.575	180	2.7.697	92.65	
0166	23	58.036	.575	180	27.080	265.31	
0167	24	59.161	.575	180	3.811	269.60	
0168	13	56.161	.925	198	33.951	254.53	
0169	14	58.036	.925	198	.100	90.00	
0170	15	59.161	.925	198	29.810	54.21	
0171	16	56.161	.700	198	18.062	262.60	
0172	17	58.036	.700	198	21.506	48.43	
0173	18	59.161	.700	198	52.382	65.54	
0174	19	56.161	.800	198	15.924	15.07	
0175	20	58.036	.800	198	41.168	336.66	
0176	21	59.161	.800	198	38.385	378.00	
0177	22	56.161	.575	198	49.689	59.13	
0178	23	58.036	.575	198	19.657	331.40	
0179	24	59.161	.575	198	11.885	34.62	
0180	13	56.161	.925	216	33.617	332.81	

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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

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0184

RUN # 66

DATE 8/27/82

MEASUREMENT LOCATION: DOWNSTREAM

0185

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KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
14	58.036	.925	216	.100	90.00
15	59.161	.925	216	37.454	306.50
16	56.161	.700	216	47.130	102.57
17	58.036	.700	216	45.883	102.13
18	59.161	.700	216	22.861	105.13
19	56.161	.800	216	8.849	87.24
20	58.036	.800	216	29.795	95.90
21	59.161	.800	216	47.559	124.64
22	56.161	.575	216	45.438	43.54
23	58.036	.575	216	32.986	12.75
24	59.161	.575	216	46.989	31.04
13	56.161	.925	234	43.951	103.87
14	58.036	.925	234	.100	90.00
15	59.161	.925	234	24.836	107.36
16	56.161	.700	234	7.983	14.16
17	58.036	.700	234	40.229	356.94
18	59.161	.700	234	47.210	338.15
19	56.161	.800	234	15.198	308.13
20	58.036	.800	234	50.851	277.23
21	59.161	.800	234	64.591	257.10
22	56.161	.575	234	37.452	369.49
23	58.036	.575	234	60.685	350.16
24	59.161	.575	234	58.081	342.88
13	56.161	.925	252	16.418	246.33
14	58.036	.925	252	.100	90.00
15	59.161	.925	252	24.203	56.38
16	56.161	.700	252	31.211	296.94
17	58.036	.700	252	21.130	347.64
18	59.161	.700	252	40.305	58.02
19	56.161	.800	252	21.520	250.15
20	58.036	.800	252	6.123	332.15
21	59.161	.800	252	33.796	410.18
22	56.161	.575	252	21.783	373.19
23	58.036	.575	252	37.343	368.43
24	59.161	.575	252	36.489	352.41
13	56.161	.925	270	58.018	308.33
14	58.036	.925	270	.100	90.00
15	59.161	.925	270	29.102	369.30
16	56.161	.700	270	.100	90.00
17	58.036	.700	270	50.321	152.56
18	59.161	.700	270	68.495	161.77
19	56.161	.800	270	29.571	203.94
20	58.036	.800	270	79.405	152.77
21	59.161	.800	270	91.644	144.39
22	56.161	.575	270	11.301	16.05
23	58.036	.575	270	34.879	194.35
24	59.161	.575	270	23.719	152.68
13	56.161	.925	288	10.156	131.16
14	58.036	.925	288	.100	90.00
15	59.161	.925	288	27.910	369.88
16	56.161	.700	288	15.992	232.67
17	58.036	.700	288	35.598	240.92

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RUN # 66

DATE 8/27/82

MEASUREMENT LOCATION: DOWNSTREAM

0246

0247

KULITE NO.	KULITE (in.)	POSITION (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
18	59.161	.700	288	44.612	274.12
19	56.161	.800	288	24.965	221.81
20	58.036	.800	288	35.525	230.28
21	59.161	.800	288	28.618	273.97
22	56.161	.575	268	31.785	331.09
23	58.036	.575	288	61.277	248.47
24	59.161	.575	288	36.106	247.31
13	56.161	.925	306	47.359	232.01
14	58.036	.925	306	.100	90.00
15	59.161	.925	306	14.968	343.64
16	56.161	.700	306	33.231	323.73
17	58.036	.700	306	32.873	350.65
18	59.161	.700	306	23.851	381.25
19	56.161	.800	306	11.288	225.56
20	58.036	.800	306	42.305	34.28
21	59.161	.800	306	56.739	57.36
22	56.161	.575	306	58.954	323.94
23	58.036	.575	306	43.280	284.90
24	59.161	.575	306	44.106	314.57
13	56.161	.925	324	33.637	336.61
14	58.036	.925	324	.100	90.00
15	59.161	.925	324	29.316	291.49
16	56.161	.700	324	20.107	49.99
17	58.036	.700	324	7.894	111.65
18	59.161	.700	324	34.040	227.63
19	56.161	.800	324	24.437	75.34
20	58.036	.800	324	44.602	81.76
21	59.161	.800	324	40.384	139.82
22	56.161	.575	324	50.380	313.42
23	58.036	.575	324	30.660	275.40
24	59.161	.575	324	43.160	308.40
13	56.161	.925	342	34.387	123.70
14	58.036	.925	342	.100	90.00
15	59.161	.925	342	12.003	287.78
16	56.161	.700	342	12.011	227.60
17	58.036	.700	342	38.782	295.30
18	59.161	.700	342	54.833	321.51
19	56.161	.800	342	6.578	129.98
20	58.036	.800	342	39.679	282.22
21	59.161	.800	342	61.489	311.17
22	56.161	.575	342	26.915	310.02
23	58.036	.575	342	57.660	276.71
24	59.161	.575	342	40.918	295.18

TEMP13 T=00004 IS ON CR AA USING 00072 BLKS R=0000

0001	PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM				PAGE	
0002						
0003						
0004	RUN # 67	DATE 8/31/82	MEASUREMENT LOCATION: UPSTREAM			
0005						
0006	CONFIGURATION: HARDWALL		FAN SPEED: 7600 rpm			
0007						
0008	TEMPERATURES (deg. F):					
0009	INLET (DRY) :					
0010	CHAMBER (DRY) :					
0011	CHAMBER (WET) :					
0012	DATA REDUCTION: FROM TAPE					
0013						
0014	KULITE	KULITE	POSITION	AMPLITUDE	PHASE	
0015	NO.	AXIAL (in.)	RADIAL (r/r_2)	CIRCUM. (deg.)	(Voltsx10)	
0016	-----	-----	-----	-----	-----	
0017	-----	-----	-----	-----	-----	
0018	13	27.161	.925	0	50.509	71.34
0019	14	29.036	.925	0	41.046	92.78
0020	15	30.161	.925	0	29.575	75.24
0021	16	27.161	.700	0	24.054	66.68
0022	17	29.036	.700	0	27.245	99.23
0023	18	30.161	.700	0	29.062	83.07
0024	19	27.161	.800	0	18.733	90.57
0025	20	29.036	.800	0	11.931	290.53
0026	21	30.161	.800	0	6.290	374.49
0027	22	27.161	.575	0	9.809	155.43
0028	23	29.036	.575	0	7.580	68.67
0029	24	30.161	.575	0	7.502	122.39
0030	13	27.161	.925	18	66.963	198.51
0031	14	29.036	.925	18	73.176	218.93
0032	15	30.161	.925	18	49.093	185.77
0033	16	27.161	.700	18	25.947	243.29
0034	17	29.036	.700	18	37.119	217.80
0035	18	30.161	.700	18	39.372	162.38
0036	19	27.161	.800	18	46.225	226.47
0037	20	29.036	.800	18	38.839	241.53
0038	21	30.161	.800	18	42.289	171.61
0039	22	27.161	.575	18	16.708	233.35
0040	23	29.036	.575	18	11.083	132.81
0041	24	30.161	.575	18	8.368	291.89
0042	13	27.161	.925	36	50.997	321.18
0043	14	29.036	.925	36	34.783	317.38
0044	15	30.161	.925	36	16.053	269.16
0045	16	27.161	.700	36	57.807	278.66
0046	17	29.036	.700	36	46.575	311.57
0047	18	30.161	.700	36	1.100	90.00
0048	19	27.161	.800	36	56.998	329.10
0049	20	29.036	.800	36	16.923	316.47
0050	21	30.161	.800	36	13.814	260.47
0051	22	27.161	.575	36	7.996	323.60
0052	23	29.036	.575	36	23.434	344.32
0053	24	30.161	.575	36	8.516	325.84
0054	13	27.161	.925	54	63.678	81.31
0055	14	29.036	.925	54	45.330	72.54
0056	15	30.161	.925	54	41.958	41.27
0057	16	27.161	.700	54	30.343	104.21
0058	17	29.036	.700	54	5.625	62.96

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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

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RUN # 67 DATE 8/31/82 MEASUREMENT LOCATION: UPSTREAM

0064

KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r_2)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0068	18	30.161	.700	54	19.988
0069	19	27.161	.800	54	56.086
0070	20	29.036	.800	54	23.084
0071	21	30.161	.800	54	32.978
0072	22	27.161	.575	54	32.197
0073	23	29.036	.575	54	9.440
0074	24	30.161	.575	54	11.089
0075	13	27.161	.925	72	69.704
0076	14	29.036	.925	72	29.032
0077	15	30.161	.925	72	9.793
0078	16	27.161	.700	72	39.192
0079	17	29.036	.700	72	8.607
0080	18	30.161	.700	72	1.600
0081	19	27.161	.800	72	38.366
0082	20	29.036	.800	72	9.131
0083	21	30.161	.800	72	5.300
0084	22	27.161	.575	72	22.085
0085	23	29.036	.575	72	12.864
0086	24	30.161	.575	72	6.450
0087	13	27.161	.925	90	72.458
0088	14	29.036	.925	90	31.973
0089	15	30.161	.925	90	10.340
0090	16	27.161	.700	90	36.609
0091	17	29.036	.700	90	13.701
0092	18	30.161	.700	90	23.104
0093	19	27.161	.800	90	73.688
0094	20	29.036	.800	90	6.900
0095	21	30.161	.800	90	25.035
0096	22	27.161	.575	90	31.140
0097	23	29.036	.575	90	12.986
0098	24	30.161	.575	90	7.990
0099	13	27.161	.925	108	26.840
0100	14	29.036	.925	108	56.789
0101	15	30.161	.925	108	64.133
0102	16	27.161	.700	108	14.103
0103	17	29.036	.700	108	24.806
0104	18	30.161	.700	108	31.923
0105	19	27.161	.800	108	20.777
0106	20	29.036	.800	108	35.288
0107	21	30.161	.800	108	40.591
0108	22	27.161	.575	108	41.322
0109	23	29.036	.575	108	37.152
0110	24	30.161	.575	108	19.862
0111	13	27.161	.925	126	56.217
0112	14	29.036	.925	126	50.962
0113	15	30.161	.925	126	43.400
0114	16	27.161	.700	126	20.277
0115	17	29.036	.700	126	27.508
0116	18	30.161	.700	126	27.895
0117	19	27.161	.800	126	42.815
0118	20	29.036	.800	126	24.007
0119	21	30.161	.800	126	23.792

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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

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RUN # 67 DATE 8/31/82 MEASUREMENT LOCATION: UPSTREAM

KULITE NO.	KULITE AXIAL (in.)	POSITION r/r_2	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0129	22	27.161	.575	126	38.685
0130	23	29.036	.575	126	51.943
0131	24	30.161	.575	126	22.086
0132	13	27.161	.925	144	103.839
0133	14	29.036	.925	144	45.286
0134	15	30.161	.925	144	33.939
0135	16	27.161	.700	144	71.436
0136	17	29.036	.700	144	54.232
0137	18	30.161	.700	144	63.980
0138	19	27.161	.800	144	93.805
0139	20	29.036	.800	144	53.897
0140	21	30.161	.800	144	38.120
0141	22	27.161	.575	144	61.537
0142	23	29.036	.575	144	62.405
0143	24	30.161	.575	144	36.304
0144	13	27.161	.925	162	34.467
0145	14	29.036	.925	162	49.550
0146	15	30.161	.925	162	62.605
0147	16	27.161	.700	162	18.108
0148	17	29.036	.700	162	13.532
0149	18	30.161	.700	162	21.086
0150	19	27.161	.800	162	13.416
0151	20	29.036	.800	162	16.414
0152	21	30.161	.800	162	27.915
0153	22	27.161	.575	162	8.957
0154	23	29.036	.575	162	18.278
0155	24	30.161	.575	162	22.635
0156	13	27.161	.925	180	115.657
0157	14	29.036	.925	180	52.932
0158	15	30.161	.925	180	68.228
0159	16	27.161	.700	180	37.320
0160	17	29.036	.700	180	47.673
0161	18	30.161	.700	180	37.472
0162	19	27.161	.800	180	73.831
0163	20	29.036	.800	180	30.646
0164	21	30.161	.800	180	25.958
0165	22	27.161	.575	180	34.686
0166	23	29.036	.575	180	11.073
0167	24	30.161	.575	180	15.166
0168	13	27.161	.925	198	28.397
0169	14	29.036	.925	198	24.789
0170	15	30.161	.925	198	38.942
0171	16	27.161	.700	198	15.288
0172	17	29.036	.700	198	16.365
0173	18	30.161	.700	198	10.899
0174	19	27.161	.800	198	21.861
0175	20	29.036	.800	198	33.334
0176	21	30.161	.800	198	36.478
0177	22	27.161	.575	198	20.646
0178	23	29.036	.575	198	12.250
0179	24	30.161	.575	198	18.526
0180	13	27.161	.925	216	33.842

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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

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RUN # 67 DATE 8/31/82 MEASUREMENT LOCATION: UPSTREAM

KULITE NO.	KULITE AXIAL (in.)	POSITION (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0190	14	29.036	.925	216	35.026
0191	15	30.161	.925	216	47.094
0192	16	27.161	.700	216	36.799
0193	17	29.036	.700	216	22.396
0194	18	30.161	.700	216	15.439
0195	19	27.161	.800	216	44.097
0196	20	29.036	.800	216	21.704
0197	21	30.161	.800	216	23.547
0198	22	27.161	.575	216	20.287
0199	23	29.036	.575	216	39.203
0200	24	30.161	.575	216	25.985
0201	13	27.161	.925	234	52.426
0202	14	29.036	.925	234	16.809
0203	15	30.161	.925	234	26.931
0204	16	27.161	.700	234	34.229
0205	17	29.036	.700	234	26.275
0206	18	30.161	.700	234	37.289
0207	19	27.161	.800	234	57.916
0208	20	29.036	.800	234	29.671
0209	21	30.161	.800	234	10.565
0210	22	27.161	.575	234	38.837
0211	23	29.036	.575	234	39.997
0212	24	30.161	.575	234	30.169
0213	13	27.161	.925	252	51.229
0214	14	29.036	.925	252	27.137
0215	15	30.161	.925	252	27.813
0216	16	27.161	.700	252	16.368
0217	17	29.036	.700	252	7.096
0218	18	30.161	.700	252	.100
0219	19	27.161	.800	252	29.373
0220	20	29.036	.800	252	7.386
0221	21	30.161	.800	252	12.743
0222	22	27.161	.575	252	46.081
0223	23	29.036	.575	252	32.109
0224	24	30.161	.575	252	23.740
0225	13	27.161	.925	270	43.045
0226	14	29.036	.925	270	4.799
0227	15	30.161	.925	270	46.535
0228	16	27.161	.700	270	8.940
0229	17	29.036	.700	270	7.844
0230	18	30.161	.700	270	21.563
0231	19	27.161	.800	270	70.814
0232	20	29.036	.800	270	20.483
0233	21	30.161	.800	270	6.788
0234	22	27.161	.575	270	53.127
0235	23	29.036	.575	270	38.037
0236	24	30.161	.575	270	26.841
0237	13	27.161	.925	288	28.086
0238	14	29.036	.925	288	44.467
0239	15	30.161	.925	288	40.616
0240	16	27.161	.700	288	26.556
0241	17	29.036	.700	288	9.210

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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

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RUN # 67 DATE 8/31/82 MEASUREMENT LOCATION: UPSTREAM

0247

KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r_2)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0251	18	30.161	.700	288	11.614
0252	19	27.161	.800	288	25.905
0253	20	29.036	.800	288	18.138
0254	21	30.161	.800	288	20.983
0255	22	27.161	.575	288	58.160
0256	23	29.036	.575	288	23.220
0257	24	30.161	.575	288	6.221
0258	13	27.161	.925	306	59.419
0259	14	29.036	.925	306	60.068
0260	15	30.161	.925	306	34.222
0261	16	27.161	.700	306	2.874
0262	17	29.036	.700	306	43.311
0263	18	30.161	.700	306	28.604
0264	19	27.161	.800	306	47.463
0265	20	29.036	.800	306	45.616
0266	21	30.161	.800	306	27.662
0267	22	27.161	.575	306	12.976
0268	23	29.036	.575	306	19.684
0269	24	30.161	.575	306	25.131
0270	13	27.161	.925	324	82.781
0271	14	29.036	.925	324	18.177
0272	15	30.161	.925	324	12.641
0273	16	27.161	.700	324	60.323
0274	17	29.036	.700	324	23.403
0275	18	30.161	.700	324	18.785
0276	19	27.161	.800	324	80.766
0277	20	29.036	.800	324	14.142
0278	21	30.161	.800	324	5.819
0279	22	27.161	.575	324	49.324
0280	23	29.036	.575	324	28.147
0281	24	30.161	.575	324	26.010
0282	13	27.161	.925	342	33.205
0283	14	29.036	.925	342	39.350
0284	15	30.161	.925	342	51.007
0285	16	27.161	.700	342	28.393
0286	17	29.036	.700	342	26.117
0287	18	30.161	.700	342	37.539
0288	19	27.161	.800	342	24.808
0289	20	29.036	.800	342	14.985
0290	21	30.161	.800	342	14.476
0291	22	27.161	.575	342	27.037
0292	23	29.036	.575	342	21.718
0293	24	30.161	.575	342	16.894

TEMP13 T=00004 IS ON CR AA USING 00072 BLKS R=0000

0001	PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM				PAGE	
0002						
0003						
0004	RUN # 67	DATE 8/31/82	MEASUREMENT LOCATION: DOWNSTREAM.			
0005						
0006	CONFIGURATION: HARDNALL		FAN SPEED: 7600 rpm			
0007						
0008	TEMPERATURES (deg. F):					
0009	INLET (DRY) :					
0010	CHAMBER (DRY) :					
0011	CHAMBER (WET) :					
0012					DATA REDUCTION: FROM TAPE	
0013						
0014	KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r_2)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0015	-----	-----	-----	-----	-----	-----
0016	-----	-----	-----	-----	-----	-----
0017	-----	-----	-----	-----	-----	-----
0018	1	56.161	.925	0	92.008	115.16
0019	2	58.036	.925	0	52.612	83.75
0020	3	59.161	.925	0	60.634	22.25
0021	4	56.161	.700	0	30.862	104.67
0022	5	58.036	.700	0	25.841	92.93
0023	6	59.161	.700	0	24.471	36.79
0024	7	56.161	.800	0	55.931	167.72
0025	8	58.036	.800	0	25.112	110.64
0026	9	59.161	.800	0	27.836	.03
0027	10	56.161	.575	0	4.400	142.00
0028	11	58.036	.575	0	17.012	134.04
0029	12	59.161	.575	0	11.451	137.11
0030	1	56.161	.925	18	43.912	122.30
0031	2	58.036	.925	18	28.250	54.43
0032	3	59.161	.925	18	44.915	41.25
0033	4	56.161	.700	18	22.673	175.29
0034	5	58.036	.700	18	26.464	34.09
0035	6	59.161	.700	18	42.350	43.58
0036	7	56.161	.800	18	22.101	216.56
0037	8	58.036	.800	18	34.837	47.17
0038	9	59.161	.800	18	47.886	48.46
0039	10	56.161	.575	18	17.273	246.07
0040	11	58.036	.575	18	26.021	53.44
0041	12	59.161	.575	18	42.091	86.57
0042	1	56.161	.925	36	23.547	315.51
0043	2	58.036	.925	36	43.077	258.80
0044	3	59.161	.925	36	60.927	247.91
0045	4	56.161	.700	36	30.230	278.69
0046	5	58.036	.700	36	17.076	288.04
0047	6	59.161	.700	36	7.274	256.50
0048	7	56.161	.800	36	36.420	-1.35
0049	8	58.036	.800	36	32.784	277.67
0050	9	59.161	.800	36	34.903	242.44
0051	10	56.161	.575	36	28.132	268.10
0052	11	58.036	.575	36	8.338	354.27
0053	12	59.161	.575	36	15.519	113.39
0054	1	56.161	.925	54	36.276	101.63
0055	2	58.036	.925	54	23.654	220.05
0056	3	59.161	.925	54	22.191	303.96
0057	4	56.161	.700	54	25.028	98.81
0058	5	58.036	.700	54	16.787	212.21

0059

0060

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0062

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0065

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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

RUN # 67

DATE 8/31/82

MEASUREMENT LOCATION: DOWNSTREAM

KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r_2)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0068	6	59.161	.700	54	12.356
0069	7	56.161	.800	54	39.840
0070	8	58.036	.800	54	14.076
0071	9	59.161	.800	54	23.453
0072	10	56.161	.575	54	21.257
0073	11	58.036	.575	54	11.148
0074	12	59.161	.575	54	5.535
0075	1	56.161	.925	72	20.334
0076	2	58.036	.925	72	12.189
0077	3	59.161	.925	72	28.968
0078	4	56.161	.700	72	7.476
0079	5	58.036	.700	72	3.671
0080	6	59.161	.700	72	14.240
0081	7	56.161	.800	72	9.431
0082	8	58.036	.800	72	19.894
0083	9	59.161	.800	72	26.668
0084	10	56.161	.575	72	21.829
0085	11	58.036	.575	72	18.543
0086	12	59.161	.575	72	17.653
0087	1	56.161	.925	90	83.396
0088	2	58.036	.925	90	61.713
0089	3	59.161	.925	90	72.026
0090	4	56.161	.700	90	27.331
0091	5	58.036	.700	90	13.024
0092	6	59.161	.700	90	11.297
0093	7	56.161	.800	90	53.998
0094	8	58.036	.800	90	25.964
0095	9	59.161	.800	90	39.407
0096	10	56.161	.575	90	5.881
0097	11	58.036	.575	90	17.166
0098	12	59.161	.575	90	10.556
0099	1	56.161	.925	108	22.467
0100	2	58.036	.925	108	9.087
0101	3	59.161	.925	108	-39.93
0102	4	56.161	.700	108	36.837
0103	5	58.036	.700	108	18.679
0104	6	59.161	.700	108	16.870
0105	7	56.161	.800	108	27.452
0106	8	58.036	.800	108	10.592
0107	9	59.161	.800	108	13.857
0108	10	56.161	.575	108	49.189
0109	11	58.036	.575	108	33.010
0110	12	59.161	.575	108	29.321
0111	1	56.161	.925	126	10.809
0112	2	58.036	.925	126	41.816
0113	3	59.161	.925	126	41.018
0114	4	56.161	.700	126	36.388
0115	5	58.036	.700	126	36.803
0116	6	59.161	.700	126	34.064
0117	7	56.161	.800	126	29.597
0118	8	58.036	.800	126	38.082
0119	9	59.161	.800	126	37.087

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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

0123
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RUN # 67 DATE 8/31/82 MEASUREMENT LOCATION: DOWNSTREAM

0125
0126
0127
0128

KULITE NO.	KULITE NO.	AXIAL (in.)	RADIAL (r/r_2)	POSITION (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0129	10	56.161	.575	126	49.559	141.02
0130	11	58.036	.575	126	34.195	98.78
0131	12	59.161	.575	126	32.261	55.98
0132	1	56.161	.925	144	15.668	-12.81
0133	2	58.036	.925	144	7.887	-65.90
0134	3	59.161	.925	144	44.341	282.17
0135	4	56.161	.700	144	3.759	347.30
0136	5	58.036	.700	144	6.521	141.49
0137	6	59.161	.700	144	11.249	268.80
0138	7	56.161	.800	144	17.080	17.42
0139	8	58.036	.800	144	6.064	222.92
0140	9	59.161	.800	144	25.471	258.45
0141	10	56.161	.575	144	14.447	184.09
0142	11	58.036	.575	144	17.628	143.58
0143	12	59.161	.575	144	1.129	220.41
0144	1	56.161	.925	162	13.045	159.23
0145	2	58.036	.925	162	.100	90.00
0146	3	59.161	.925	162	33.499	62.10
0147	4	56.161	.700	162	8.088	68.06
0148	5	58.036	.700	162	5.224	264.62
0149	6	59.161	.700	162	7.362	346.29
0150	7	56.161	.800	162	26.950	156.09
0151	8	58.036	.800	162	14.124	158.56
0152	9	59.161	.800	162	5.273	317.87
0153	10	56.161	.575	162	8.715	234.35
0154	11	58.036	.575	162	17.520	150.64
0155	12	59.161	.575	162	12.810	157.57
0156	1	56.161	.925	180	61.745	279.35
0157	2	58.036	.925	180	38.858	205.29
0158	3	59.161	.925	180	86.842	161.25
0159	4	56.161	.700	180	41.196	292.42
0160	5	58.036	.700	180	8.563	231.76
0161	6	59.161	.700	180	36.601	160.74
0162	7	56.161	.800	180	32.580	-28.27
0163	8	58.036	.800	180	.100	90.00
0164	9	59.161	.800	180	34.365	122.28
0165	10	56.161	.575	180	24.690	268.23
0166	11	58.036	.575	180	.100	90.00
0167	12	59.161	.575	180	18.569	111.72
0168	1	56.161	.925	198	26.062	267.20
0169	2	58.036	.925	198	67.364	250.57
0170	3	59.161	.925	198	53.324	254.64
0171	4	56.161	.700	198	18.375	327.65
0172	5	58.036	.700	198	30.243	250.12
0173	6	59.161	.700	198	25.852	240.97
0174	7	56.161	.800	198	32.752	1.59
0175	8	58.036	.800	198	37.109	248.81
0176	9	59.161	.800	198	28.130	211.04
0177	10	56.161	.575	198	22.246	333.47
0178	11	58.036	.575	198	8.051	265.52
0179	12	59.161	.575	198	9.204	184.66
0180	1	56.161	.925	216	18.115	57.04

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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

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RUN # 67 DATE 8/31/82 MEASUREMENT LOCATION: DOWNSTREAM

KULITE NO.	KULITE AXIAL (in.)	POSITION (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0190	2	58.036	.925	216	20.596
0191	3	59.161	.925	216	23.360
0192	4	56.161	.700	216	21.137
0193	5	58.036	.700	216	6.787
0194	6	59.161	.700	216	9.067
0195	7	56.161	.800	216	16.619
0196	8	58.036	.800	216	10.462
0197	9	59.161	.800	216	5.872
0198	10	56.161	.575	216	26.898
0199	11	58.036	.575	216	4.703
0200	12	59.161	.575	216	5.549
0201	1	56.161	.925	234	67.350
0202	2	58.036	.925	234	4.639
0203	3	59.161	.925	234	60.730
0204	4	56.161	.700	234	20.961
0205	5	58.036	.700	234	6.726
0206	6	59.161	.700	234	18.102
0207	7	56.161	.800	234	34.363
0208	8	58.036	.800	234	3.837
0209	9	59.161	.800	234	32.306
0210	10	56.161	.575	234	21.706
0211	11	58.036	.575	234	14.757
0212	12	59.161	.575	234	6.267
0213	1	56.161	.925	252	22.245
0214	2	58.036	.925	252	39.945
0215	3	59.161	.925	252	33.244
0216	4	56.161	.700	252	9.076
0217	5	58.036	.700	252	12.823
0218	6	59.161	.700	252	23.096
0219	7	56.161	.800	252	10.319
0220	8	58.036	.800	252	16.275
0221	9	59.161	.800	252	17.379
0222	10	56.161	.575	252	29.634
0223	11	58.036	.575	252	27.360
0224	12	59.161	.575	252	29.363
0225	1	56.161	.925	270	97.321
0226	2	58.036	.925	270	82.670
0227	3	59.161	.925	270	104.985
0228	4	56.161	.700	270	19.427
0229	5	58.036	.700	270	32.031
0230	6	59.161	.700	270	46.070
0231	7	56.161	.800	270	58.631
0232	8	58.036	.800	270	42.942
0233	9	59.161	.800	270	44.140
0234	10	56.161	.575	270	14.909
0235	11	58.036	.575	270	24.008
0236	12	59.161	.575	270	29.038
0237	1	56.161	.925	288	55.245
0238	2	58.036	.925	288	88.995
0239	3	59.161	.925	288	71.555
0240	4	56.161	.700	288	22.171
0241	5	58.036	.700	288	27.800

0242
0243
0244
0245
0246

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

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RUN # 67 DATE 8/31/82 MEASUREMENT LOCATION: DOWNSTREAM

KULITE NO.	KUI ITE AXIAL (in.)	POSITION RADIAL (r/r_2)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
6	59.161	.700	288	26.657	94.85
7	56.161	.800	288	35.766	259.64
8	58.036	.800	288	55.561	114.20
9	59.161	.800	288	52.525	96.73
10	56.161	.575	288	38.200	300.53
11	58.036	.575	288	14.147	-1.71
12	59.161	.575	288	1.100	-27.00
1	56.161	.925	306	28.974	132.99
2	58.036	.925	306	19.031	71.72
3	59.161	.925	306	41.569	21.61
4	56.161	.700	306	14.022	313.22
5	58.036	.700	306	10.212	267.75
6	59.161	.700	306	12.705	256.98
7	56.161	.800	306	4.750	161.80
8	58.036	.800	306	6.479	69.35
9	59.161	.800	306	7.388	12.46
10	56.161	.575	306	35.974	303.93
11	58.036	.575	306	22.501	264.20
12	59.161	.575	306	30.742	237.30
1	56.161	.925	324	36.944	213.98
2	58.036	.925	324	14.176	-15.30
3	59.161	.925	324	48.743	68.44
4	56.161	.700	324	23.414	234.08
5	58.036	.700	324	25.155	257.78
6	59.161	.700	324	8.347	176.61
7	56.161	.800	324	27.047	-90.35
8	58.036	.800	324	18.280	294.59
9	59.161	.800	324	17.571	42.92
10	56.161	.575	324	22.644	274.89
11	58.036	.575	324	29.354	234.41
12	59.161	.575	324	40.378	209.39
1	56.161	.925	342	35.146	256.15
2	58.036	.925	342	8.939	172.92
3	59.161	.925	342	20.047	159.79
4	56.161	.700	342	28.156	263.02
5	58.036	.700	342	15.964	163.08
6	59.161	.700	342	30.155	162.31
7	56.161	.800	342	21.305	-2.14
8	58.036	.800	342	22.432	196.18
9	59.161	.800	342	38.051	193.91
10	56.161	.575	342	22.592	279.29
11	58.036	.575	342	29.915	217.62
12	59.161	.575	342	46.109	207.02

TEMP13 T=00004 IS ON CR AA USING 00072 BLKS R=0000

0001
 0002 PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM PAGE
 0003
 0004 RUN # 69 DATE 9/ 3/82 MEASUREMENT LOCATION: UPSTREAM
 0005
 0006 CONFIGURATION: HARDWALL FAN SPEED: 4000 rpm
 0007
 0008 TEMPERATURES (deg. F):
 0009 INLET (DRY) : 82->84
 0010 CHAMBER (DRY): 79->84
 0011 CHAMBER (WET): 76

0012 DATA REDUCTION: ON-LINE
 0013

0014	KULITE	KULITE	POSITION	AMPLITUDE	PHASE
0015	NO.	AXIAL	RADIAL	(Voltsx10)	(deg.)
0016		(in.)	(r/r ₂)	CIRCUM. (deg.)	
0017	-----	-----	-----	-----	-----
0018	1	27.161	.925	0	8.306
0019	2	29.036	.925	0	13.186
0020	3	30.161	.925	0	19.061
0021	4	27.161	.700	0	13.166
0022	5	29.036	.700	0	10.504
0023	6	30.161	.700	0	21.693
0024	7	27.161	.800	0	16.638
0025	8	29.036	.800	0	2.276
0026	9	30.161	.800	0	15.122
0027	10	27.161	.575	0	18.375
0028	11	29.036	.575	0	6.563
0029	12	30.161	.575	0	7.688
0030	1	27.161	.925	18	22.547
0031	2	29.036	.925	18	21.272
0032	3	30.161	.925	18	17.596
0033	4	27.161	.700	18	13.374
0034	5	29.036	.700	18	16.769
0035	6	30.161	.700	18	18.064
0036	7	27.161	.800	18	15.492
0037	8	29.036	.800	18	4.458
0038	9	30.161	.800	18	7.450
0039	10	27.161	.575	18	13.646
0040	11	29.036	.575	18	7.934
0041	12	30.161	.575	18	4.732
0042	1	27.161	.925	36	17.893
0043	2	29.036	.925	36	19.771
0044	3	30.161	.925	36	26.074
0045	4	27.161	.700	36	7.946
0046	5	29.036	.700	36	23.792
0047	6	30.161	.700	36	10.858
0048	7	27.161	.800	36	11.289
0049	8	29.036	.800	36	8.889
0050	9	30.161	.800	36	12.439
0051	10	27.161	.575	36	13.635
0052	11	29.036	.575	36	8.170
0053	12	30.161	.575	36	6.760
0054	1	27.161	.925	54	13.232
0055	2	29.036	.925	54	16.696
0056	3	30.161	.925	54	19.049
0057	4	27.161	.700	54	13.683
0058	5	29.036	.700	54	20.140

0059

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MEASUREMENT LOCATION: UPSTREAM

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KULITE

KULITE

POSITION

AMPLITUDE

PHASE

0065

NO.

AXIAL

RADIAL

CIRCUM.

(Voltsx10)

(deg.)

0066

0067

0068

6

30.161

.700

54

14.741

314.80

0069

7

27.161

.800

54

12.296

70.92

0070

8

29.036

.800

54

3.255

-9.77

0071

9

30.161

.800

54

9.668

-54.17

0072

10

27.161

.575

54

15.055

-38.93

0073

11

29.036

.575

54

5.995

167.24

0074

12

30.161

.575

54

11.679

314.15

0075

1

27.161

.925

72

18.552

351.53

0076

2

29.036

.925

72

19.748

293.70

0077

3

30.161

.925

72

17.086

289.33

0078

4

27.161

.700

72

18.681

304.71

0079

5

29.036

.700

72

20.035

321.93

0080

6

30.161

.700

72

16.107

276.64

0081

7

27.161

.800

72

12.276

39.14

0082

8

29.036

.800

72

5.628

65.31

0083

9

30.161

.800

72

10.061

-86.19

0084

10

27.161

.575

72

7.157

14.11

0085

11

29.036

.575

72

6.263

117.18

0086

12

30.161

.575

72

2.204

223.69

0087

1

27.161

.925

90

15.067

269.45

0088

2

29.036

.925

90

26.806

265.49

0089

3

30.161

.925

90

16.208

267.36

0090

4

27.161

.700

90

17.420

331.68

0091

5

29.036

.700

90

11.083

293.26

0092

6

30.161

.700

90

29.298

280.30

0093

7

27.161

.800

90

16.803

6.19

0094

8

29.036

.800

90

4.759

31.94

0095

9

30.161

.800

90

22.391

61.15

0096

10

27.161

.575

90

14.164

348.80

0097

11

29.036

.575

90

9.244

343.53

0098

12

30.161

.575

90

8.996

199.36

0099

1

27.161

.925

108

17.208

298.44

0100

2

29.036

.925

108

23.268

250.56

0101

3

30.161

.925

108

25.441

258.78

0102

4

27.161

.700

108

16.571

310.44

0103

5

29.036

.700

108

21.066

269.39

0104

6

30.161

.700

108

25.247

255.44

0105

7

27.161

.800

108

13.194

9.31

0106

8

29.036

.800

108

.101

110.44

0107

9

30.161

.800

108

16.009

244.41

0108

10

27.161

.575

108

10.684

324.52

0109

11

29.036

.575

108

8.036

332.92

0110

12

30.161

.575

108

9.787

-1.37

0111

1

27.161

.925

126

18.507

-69.76

0112

2

29.036

.925

126

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0123

RUN # 69

DATE 9/ 3/82

MEASUREMENT LOCATION: UPSTREAM

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0125

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0127

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KULITE NO.	KULITE AXIAL (in.)	POSITION (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
10	27.161	.575	126	17.067	329.13
11	29.036	.575	126	10.107	324.50
12	30.161	.575	126	8.973	52.74
1	27.161	.925	144	15.272	288.03
2	29.036	.925	144	21.077	228.04
3	30.161	.925	144	19.831	232.31
4	27.161	.700	144	17.706	289.26
5	29.036	.700	144	19.765	254.24
6	30.161	.700	144	20.530	228.71
7	27.161	.800	144	16.362	-31.74
8	29.036	.800	144	9.235	-85.94
9	30.161	.800	144	12.447	225.29
10	27.161	.575	144	18.842	311.60
11	29.036	.575	144	8.294	27.26
12	30.161	.575	144	8.931	-37.83
1	27.161	.925	162	16.978	264.18
2	29.036	.925	162	16.234	210.25
3	30.161	.925	162	23.289	207.14
4	27.161	.700	162	19.839	284.03
5	29.036	.700	162	14.278	236.27
6	30.161	.700	162	20.388	204.64
7	27.161	.800	162	15.926	-53.36
8	29.036	.800	162	9.629	-92.88
9	30.161	.800	162	11.868	-73.69
10	27.161	.575	162	19.951	291.14
11	29.036	.575	162	7.696	364.50
12	30.161	.575	162	8.194	210.70
1	27.161	.925	180	19.808	252.48
2	29.036	.925	180	21.228	207.10
3	30.161	.925	180	20.930	194.59
4	27.161	.700	180	19.042	271.78
5	29.036	.700	180	13.305	207.68
6	30.161	.700	180	24.373	212.10
7	27.161	.800	180	18.227	261.01
8	29.036	.800	180	12.569	238.91
9	30.161	.800	180	15.129	199.39
10	27.161	.575	180	17.562	289.73
11	29.036	.575	180	8.517	347.67
12	30.161	.575	180	7.198	277.01
1	27.161	.925	198	28.174	232.61
2	29.036	.925	198	27.772	193.83
3	30.161	.925	198	24.789	187.67
4	27.161	.700	198	20.178	237.46
5	29.036	.700	198	23.307	199.29
6	30.161	.700	198	25.706	185.17
7	27.161	.800	198	20.190	-82.34
8	29.036	.800	198	12.429	246.27
9	30.161	.800	198	19.303	190.48
10	27.161	.575	198	23.511	282.29
11	29.036	.575	198	7.574	331.38
12	30.161	.575	198	11.391	197.12
1	27.161	.925	216	19.733	225.83

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MEASUREMENT LOCATION:

UPSTREAM

0185

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KULITE NO.	KULITE NO.	AXIAL (in.)	RADIAL (r/r ₂)	POSITION (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0190	2	29.035	.925	216	21.309	176.76
0191	3	30.151	.925	216	28.572	181.17
0192	4	27.151	.700	216	19.789	237.49
0193	5	29.036	.700	216	15.194	191.73
0194	6	30.161	.700	216	30.064	190.80
0195	7	27.161	.800	216	21.335	-27.12
0196	8	29.036	.800	216	19.861	231.43
0197	9	30.161	.800	216	23.600	150.24
0198	10	27.161	.575	216	23.976	263.34
0199	11	29.036	.575	216	7.995	338.77
0200	12	30.151	.575	216	12.854	270.98
0201	1	27.161	.925	234	25.714	-54.54
0202	2	29.036	.925	234	22.758	179.49
0203	3	30.151	.925	234	25.676	157.11
0204	4	27.161	.700	234	19.221	214.77
0205	5	29.036	.700	234	19.470	185.15
0206	6	30.161	.700	234	23.234	163.41
0207	7	27.151	.800	234	18.967	246.55
0208	8	29.036	.800	234	13.266	215.32
0209	9	30.161	.800	234	13.124	170.57
0210	10	27.151	.575	234	22.986	255.13
0211	11	29.036	.575	234	7.949	231.30
0212	12	30.151	.575	234	9.123	267.33
0213	1	27.161	.925	252	18.890	205.11
0214	2	29.036	.925	252	19.437	148.70
0215	3	30.161	.925	252	20.264	128.31
0216	4	27.161	.700	252	22.438	197.30
0217	5	29.036	.700	252	17.321	165.64
0218	6	30.161	.700	252	21.808	126.58
0219	7	27.161	.800	252	23.766	238.99
0220	8	29.036	.800	252	12.054	231.01
0221	9	30.161	.800	252	17.257	237.98
0222	10	27.161	.575	252	19.452	237.32
0223	11	29.036	.575	252	6.713	217.36
0224	12	30.151	.575	252	7.494	233.49
0225	1	27.161	.925	270	17.217	153.94
0226	2	29.036	.925	270	19.023	111.00
0227	3	30.161	.925	270	20.390	112.75
0228	4	27.161	.700	270	18.916	173.90
0229	5	29.036	.700	270	11.759	149.64
0230	6	30.161	.700	270	30.454	106.20
0231	7	27.161	.800	270	17.674	221.16
0232	8	29.036	.800	270	10.510	234.88
0233	9	30.161	.800	270	10.295	105.23
0234	10	27.161	.575	270	21.968	224.70
0235	11	29.036	.575	270	8.203	-74.68
0236	12	30.161	.575	270	4.564	-43.95
0237	1	27.161	.925	288	28.974	128.24
0238	2	29.036	.925	288	21.065	76.20
0239	3	30.161	.925	288	24.000	81.72
0240	4	27.151	.700	288	15.824	151.78
0241	5	29.036	.700	288	20.033	106.40

0242
 0243 PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM PAGE
 0244
 0245 RUN # 69 DATE 9/ 3/82 MEASUREMENT LOCATION: UPSTREAM
 0246
 0247 KULITE KULITE POSITION AMPLITUDE PHASE
 0248 NO. AXIAL RADIAL CIRCUM. (Voltsx10) (deg.)
 0249 (in.) (r/r_2) (deg.)
 0250
 0251 6 30.161 .700 288 23.237 80.25
 0252 7 27.161 .800 288 18.298 197.22
 0253 8 29.036 .800 288 9.475 135.37
 0254 9 30.161 .800 288 14.257 76.29
 0255 10 27.161 .575 288 24.506 207.84
 0256 11 29.036 .575 288 9.199 274.18
 0257 12 30.161 .575 288 10.334 95.50
 0258 1 27.161 .925 306 18.649 44.32
 0259 2 29.036 .925 306 17.765 79.84
 0260 3 30.161 .925 306 25.221 72.10
 0261 4 27.161 .700 306 15.398 139.73
 0262 5 29.036 .700 306 17.334 101.45
 0263 6 30.161 .700 306 25.561 67.15
 0264 7 27.161 .800 306 18.894 168.86
 0265 8 29.036 .800 306 12.300 119.17
 0266 9 30.161 .800 306 6.842 55.76
 0267 10 27.161 .575 306 19.910 163.05
 0268 11 29.036 .575 306 5.973 270.27
 0269 12 30.161 .575 306 4.473 169.64
 0270 1 27.161 .925 324 12.872 122.89
 0271 2 29.036 .925 324 12.462 41.06
 0272 3 30.161 .925 324 15.897 53.69
 0273 4 27.161 .700 324 14.807 108.55
 0274 5 29.036 .700 324 14.019 84.03
 0275 6 30.161 .700 324 17.674 46.41
 0276 7 27.161 .800 324 14.484 156.20
 0277 8 29.036 .800 324 6.452 216.71
 0278 9 30.161 .800 324 8.654 142.86
 0279 10 27.161 .575 324 17.661 170.78
 0280 11 29.036 .575 324 5.964 164.45
 0281 12 30.161 .575 324 1.052 99.21
 0282 1 27.161 .925 342 7.158 112.38
 0283 2 29.036 .925 342 6.837 -13.23
 0284 3 30.161 .925 342 19.619 9.98
 0285 4 27.161 .700 342 17.616 89.76
 0286 5 29.036 .700 342 7.194 85.25
 0287 6 30.161 .700 342 20.484 93.97
 0288 7 27.161 .800 342 19.331 148.77
 0289 8 29.036 .800 342 1.899 230.99
 0290 9 30.161 .800 342 10.207 210.03
 0291 10 27.161 .575 342 19.354 44.21
 0292 11 29.036 .575 342 5.745 138.61
 0293 12 30.161 .575 342 9.020 -1.83

TEMP6 T=00004 IS ON CR AA USING 00078 BLKS R=0000

0001
 0002 PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM PAGE
 0003
 0004 RUN # 69 DATE 9/ 3/82 MEASUREMENT LOCATION: DOWNSTREAM
 0005
 0006 CONFIGURATION: HARDWALL FAN SPEED: 4000 rpm
 0007
 0008 TEMPERATURES (deg. F):
 0009 INLET (DRY) : 82->84
 0010 CHAMBER (DRY): 79->84
 0011 CHAMBER (WET): 76
 0012 DATA REDUCTION: ON-LINE
 0013

KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r_2)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
13	56.161	.925	0	9.443	251.69
14	58.036	.925	0	11.442	232.82
15	59.161	.925	0	14.466	122.51
16	56.161	.700	0	5.353	212.21
17	58.036	.700	0	23.788	146.32
18	59.161	.700	0	25.950	139.10
19	56.161	.800	0	13.173	196.27
20	58.036	.800	0	19.897	239.89
21	59.161	.800	0	0.000	0.00
22	56.161	.575	0	13.142	213.81
23	58.036	.575	0	25.285	139.05
24	59.161	.575	0	20.994	152.60
13	56.161	.925	18	7.214	205.71
14	58.036	.925	18	16.565	222.08
15	59.161	.925	18	18.779	118.58
16	56.161	.700	18	6.134	188.36
17	58.036	.700	18	27.885	139.67
18	59.161	.700	18	25.197	130.22
19	56.161	.800	18	17.643	269.90
20	58.036	.800	18	26.154	144.36
21	59.161	.800	18	0.000	0.00
22	56.161	.575	18	15.776	186.95
23	58.036	.575	18	28.372	130.98
24	59.161	.575	18	24.216	150.20
13	56.161	.925	36	9.842	180.03
14	58.036	.925	36	18.947	122.38
15	59.161	.925	36	20.479	110.16
16	56.161	.700	36	9.182	164.51
17	58.036	.700	36	27.978	124.15
18	59.161	.700	36	26.402	119.22
19	56.161	.800	36	22.534	160.25
20	58.036	.800	36	25.822	137.01
21	59.161	.800	36	0.000	0.00
22	56.161	.575	36	18.696	167.96
23	58.036	.575	36	22.799	123.08
24	59.161	.575	36	24.997	126.19
13	56.161	.925	54	7.354	161.22
14	58.036	.925	54	15.703	100.68
15	59.161	.925	54	15.763	81.46
16	56.161	.700	54	5.079	141.93
17	58.036	.700	54	22.367	99.58

0059

0060

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0063

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

RUN # 69 DATE 9/ 3/82 MEASUREMENT LOCATION: DOWNSTREAM

KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCU. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0068	18	59.161	.700	54	20.538
0069	19	56.161	.800	54	19.897
0070	20	58.036	.800	54	24.237
0071	21	59.161	.800	54	0.000
0072	22	56.161	.575	54	19.847
0073	23	58.036	.575	54	20.251
0074	24	59.161	.575	54	22.940
0075	13	56.161	.925	72	4.840
0076	14	58.036	.925	72	12.341
0077	15	59.161	.925	72	18.107
0078	16	56.161	.700	72	8.323
0079	17	58.036	.700	72	21.861
0080	18	59.161	.700	72	20.518
0081	19	56.161	.800	72	13.012
0082	20	58.036	.800	72	20.548
0083	21	59.161	.800	72	0.000
0084	22	56.161	.575	72	12.386
0085	23	58.036	.575	72	21.287
0086	24	59.161	.575	72	18.096
0087	13	56.161	.925	90	7.886
0088	14	58.036	.925	90	23.106
0089	15	59.161	.925	90	24.046
0090	16	56.161	.700	90	10.372
0091	17	58.036	.700	90	25.063
0092	18	59.161	.700	90	31.433
0093	19	56.161	.800	90	16.859
0094	20	58.036	.800	90	25.231
0095	21	59.161	.800	90	0.000
0096	22	56.161	.575	90	15.483
0097	23	58.036	.575	90	23.119
0098	24	59.161	.575	90	25.834
0099	13	56.161	.925	108	12.260
0100	14	58.036	.925	108	26.058
0101	15	59.161	.925	108	28.034
0102	16	56.161	.700	108	11.994
0103	17	58.036	.700	108	32.726
0104	18	59.161	.700	108	34.701
0105	19	56.161	.800	108	16.824
0106	20	58.036	.800	108	27.016
0107	21	59.161	.800	108	0.000
0108	22	56.161	.575	108	22.106
0109	23	58.036	.575	108	32.699
0110	24	59.161	.575	108	29.678
0111	13	56.161	.925	126	10.996
0112	14	58.036	.925	126	25.932
0113	15	59.161	.925	126	27.228
0114	16	56.161	.700	126	15.829
0115	17	58.036	.700	126	32.194
0116	18	59.161	.700	126	33.277
0117	19	56.161	.800	126	20.821
0118	20	58.036	.800	126	30.747
0119	21	59.161	.800	126	0.000

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0123

RUN # 69

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MEASUREMENT LOCATION: DOWNSTREAM

0124

0125

KULITE NO.	KULITE NO.	POSITION AXIAL (in.)	POSITION RADIAL (r/r ₂)	POSITION CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0129	22	56.161	.575	126	21.264	42.11
0130	23	58.036	.575	126	30.373	-7.70
0131	24	59.161	.575	126	29.176	6.18
0132	13	56.161	.925	144	8.401	87.31
0133	14	58.036	.925	144	17.698	-30.33
0134	15	59.161	.925	144	22.210	-46.14
0135	16	56.161	.700	144	11.196	-1.51
0136	17	58.036	.700	144	27.034	-14.98
0137	18	59.161	.700	144	29.342	-32.32
0138	19	56.161	.800	144	15.506	127.00
0139	20	58.036	.800	144	23.636	-23.48
0140	21	59.161	.800	144	0.000	0.00
0141	22	56.161	.575	144	15.410	28.28
0142	23	58.036	.575	144	27.950	-34.28
0143	24	59.161	.575	144	24.586	-23.21
0144	13	56.161	.925	162	3.507	-21.34
0145	14	58.036	.925	162	18.522	-65.88
0146	15	59.161	.925	162	23.419	-78.35
0147	16	56.161	.700	162	8.096	-51.01
0148	17	58.036	.700	162	25.709	-57.26
0149	18	59.161	.700	162	28.630	-57.14
0150	19	56.161	.800	162	9.711	199.29
0151	20	58.036	.800	162	22.871	-57.49
0152	21	59.161	.800	162	0.000	0.00
0153	22	56.161	.575	162	11.721	17.49
0154	23	58.036	.575	162	27.479	-52.52
0155	24	59.161	.575	162	22.347	-47.48
0156	13	56.161	.925	180	4.142	302.94
0157	14	58.036	.925	180	20.541	284.20
0158	15	59.161	.925	180	25.991	273.68
0159	16	56.161	.700	180	9.575	287.87
0160	17	58.036	.700	180	28.322	296.13
0161	18	59.161	.700	180	29.443	284.61
0162	19	56.161	.800	180	12.591	169.23
0163	20	58.036	.800	180	23.678	-67.58
0164	21	59.161	.800	180	0.000	0.00
0165	22	56.161	.575	180	11.758	-4.96
0166	23	58.036	.575	180	29.523	281.38
0167	24	59.161	.575	180	22.778	291.09
0168	13	56.161	.925	198	5.981	319.36
0169	14	58.036	.925	198	19.393	272.28
0170	15	59.161	.925	198	24.908	261.10
0171	16	56.161	.700	198	11.188	293.03
0172	17	58.036	.700	198	25.405	290.02
0173	18	59.161	.700	198	30.095	275.96
0174	19	56.161	.800	198	15.278	-21.01
0175	20	58.036	.800	198	25.018	-73.69
0176	21	59.161	.800	198	0.000	0.00
0177	22	56.161	.575	198	16.710	-14.04
0178	23	58.036	.575	198	28.397	8.13
0179	24	59.161	.575	198	21.362	284.12
0180	13	56.161	.925	216	7.670	320.03

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RUN # 69

DATE 9/ 3/82

MEASUREMENT LOCATION: DOWNSTREAM

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KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	POSITION CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0190	14	58.036	.925	216	17.904
0191	15	59.161	.925	216	22.795
0192	16	56.161	.700	216	7.781
0193	17	58.036	.700	216	26.669
0194	18	59.161	.700	216	27.062
0195	19	56.161	.800	216	18.623
0196	20	58.036	.800	216	24.762
0197	21	59.161	.800	216	0.000
0198	22	56.161	.575	216	18.522
0199	23	58.036	.575	216	26.124
0200	24	59.161	.575	216	22.611
0201	13	56.161	.925	234	5.224
0202	14	58.036	.925	234	14.249
0203	15	59.161	.925	234	16.917
0204	16	56.161	.700	234	4.678
0205	17	58.036	.700	234	21.291
0206	18	59.161	.700	234	23.066
0207	19	56.161	.800	234	19.009
0208	20	58.036	.800	234	18.914
0209	21	59.161	.800	234	0.000
0210	22	56.161	.575	234	18.696
0211	23	58.036	.575	234	20.488
0212	24	59.161	.575	234	20.319
0213	13	56.161	.925	252	3.954
0214	14	58.036	.925	252	9.834
0215	15	59.161	.925	252	17.895
0216	16	56.161	.700	252	2.801
0217	17	58.036	.700	252	20.299
0218	18	59.161	.700	252	25.841
0219	19	56.161	.800	252	14.894
0220	20	58.036	.800	252	16.266
0221	21	59.161	.800	252	0.000
0222	22	56.161	.575	252	15.558
0223	23	58.036	.575	252	25.987
0224	24	59.161	.575	252	19.698
0225	13	56.161	.925	270	8.038
0226	14	58.036	.925	270	10.877
0227	15	59.161	.925	270	16.759
0228	16	56.161	.700	270	2.569
0229	17	58.036	.700	270	25.021
0230	18	59.161	.700	270	28.424
0231	19	56.161	.800	270	16.625
0232	20	58.036	.800	270	23.387
0233	21	59.161	.800	270	0.000
0234	22	56.161	.575	270	18.963
0235	23	58.036	.575	270	27.721
0236	24	59.161	.575	270	26.537
0237	13	56.161	.925	288	8.218
0238	14	58.036	.925	288	11.219
0239	15	59.161	.925	288	15.894
0240	16	56.161	.700	288	4.372
0241	17	58.036	.700	288	25.941

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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

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RUN # 69 DATE 9/ 3/82 MEASUREMENT LOCATION: DOWNSTREAM

0247	KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0248	18	59.161	.700	288	26.126	207.17
0249	19	56.161	.800	288	18.250	.47
0250	20	58.036	.800	288	26.660	220.79
0251	21	59.161	.800	288	0.000	0.00
0252	22	56.161	.575	288	20.032	273.40
0253	23	58.036	.575	288	28.245	210.86
0254	24	59.161	.575	288	24.320	223.44
0255	13	56.161	.925	306	8.594	230.00
0256	14	58.036	.925	306	11.897	214.88
0257	15	59.161	.925	306	15.157	191.06
0258	16	56.161	.700	306	10.566	306.98
0259	17	58.036	.700	306	26.909	304.73
0260	18	59.161	.700	306	26.516	201.45
0261	19	56.161	.800	306	22.840	3.78
0262	20	58.036	.800	306	23.842	218.65
0263	21	59.161	.800	306	0.000	0.00
0264	22	56.161	.575	306	21.209	276.89
0265	23	58.036	.575	306	27.340	203.13
0266	24	59.161	.575	306	24.146	234.80
0267	13	56.161	.925	324	11.779	299.51
0268	14	58.036	.925	324	9.514	204.64
0269	15	59.161	.925	324	11.587	159.77
0270	16	56.161	.700	324	7.641	227.48
0271	17	58.036	.700	324	19.536	291.20
0272	18	59.161	.700	324	23.915	181.55
0273	19	56.161	.800	324	16.994	-5.67
0274	20	58.036	.800	324	18.437	207.61
0275	21	59.161	.800	324	0.000	0.00
0276	22	56.161	.575	324	19.002	277.24
0277	23	58.036	.575	324	23.129	183.49
0278	24	59.161	.575	324	18.184	218.99
0279	13	56.161	.925	342	9.446	307.38
0280	14	58.036	.925	342	5.913	180.36
0281	15	59.161	.925	342	14.399	235.48
0282	16	56.161	.700	342	6.142	228.86
0283	17	58.036	.700	342	16.509	260.05
0284	18	59.161	.700	342	20.752	157.73
0285	19	56.161	.800	342	11.778	247.97
0286	20	58.036	.800	342	12.331	272.98
0287	21	59.161	.800	342	0.000	0.00
0288	22	56.161	.575	342	12.095	251.26
0289	23	58.036	.575	342	20.282	157.11
0290	24	59.161	.575	342	16.296	181.91

TEMP13 T=00004 IS ON CR AA USING 00072 BLKS R=0000

0001
 0002 PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM PAGE
 0003
 0004 RUN # 70 DATE 9/ 8/82 MEASUREMENT LOCATION: UPSTREAM
 0005
 0006 CONFIGURATION: HARDWALL FAN SPEED: 6000 rpm
 0007
 0008 TEMPERATURES (deg. F):
 0009 INLET (DRY) : 76->80
 0010 CHAMBER (DRY) : 76->80
 0011 CHAMBER (WET) : 71
 0012 DATA REDUCTION: FROM TAPE
 0013
 0014 KULITE KULITE POSITION AMPLITUDE PHASE
 0015 NO. AXIAL RADIAL CIRCUM. (Voltsx10) (deg.)
 0016 (in.) (r/r_2)
 0017
 0018 1 27.161 .925 0 63.039 212.89
 0019 2 29.036 .925 0 18.026 187.23
 0020 3 30.161 .925 0 17.115 80.81
 0021 4 27.161 .700 0 34.924 181.56
 0022 5 29.036 .700 0 31.435 143.08
 0023 6 30.161 .700 0 35.535 105.00
 0024 7 27.161 .800 0 61.787 159.50
 0025 8 29.036 .800 0 21.622 186.77
 0026 9 30.161 .800 0 29.617 94.22
 0027 10 27.161 .575 0 29.741 154.41
 0028 11 29.036 .575 0 36.249 483.13
 0029 12 30.161 .575 0 45.476 122.03
 0030 1 27.161 .925 18 33.265 160.22
 0031 2 29.036 .925 18 22.958 83.60
 0032 3 30.161 .925 18 45.023 59.81
 0033 4 27.161 .700 18 28.785 134.69
 0034 5 29.036 .700 18 42.277 94.39
 0035 6 30.161 .700 18 41.856 82.72
 0036 7 27.161 .800 18 38.378 115.87
 0037 8 29.036 .800 18 31.340 94.92
 0038 9 30.161 .800 18 38.233 69.04
 0039 10 27.161 .575 18 24.777 118.63
 0040 11 29.036 .575 18 47.076 458.01
 0041 12 30.161 .575 18 50.831 94.21
 0042 1 27.161 .925 36 9.033 210.63
 0043 2 29.036 .925 36 39.882 25.52
 0044 3 30.161 .925 36 74.049 29.91
 0045 4 27.161 .700 36 8.505 129.46
 0046 5 29.036 .700 36 38.736 58.50
 0047 6 30.161 .700 36 32.206 59.70
 0048 7 27.161 .800 36 8.993 121.81
 0049 8 29.036 .800 36 34.273 34.14
 0050 9 30.161 .800 36 43.480 19.94
 0051 10 27.161 .575 36 21.897 104.96
 0052 11 29.036 .575 36 38.109 445.22
 0053 12 30.161 .575 36 42.061 62.52
 0054 1 27.161 .925 54 41.518 211.11
 0055 2 29.036 .925 54 20.056 292.04
 0056 3 30.161 .925 54 44.382 351.95
 0057 4 27.161 .700 54 21.915 165.32
 0058 5 29.036 .700 54 10.238 63.28

0059

0060

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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

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RUN # 70

DATE 9/ 8/82

MEASUREMENT LOCATION: UPSTREAM

KULITE NO.	KULITE NO.	AXIAL (in.)	RADIAL (r/r ₂)	POSITION CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0068	6	30.161	.700	54	28.206	20.36
0069	7	27.161	.800	54	27.680	142.21
0070	8	29.036	.800	54	5.573	291.79
0071	9	30.161	.800	54	31.034	352.56
0072	10	27.161	.575	54	21.660	142.45
0073	11	29.036	.575	54	13.533	444.07
0074	12	30.161	.575	54	33.523	59.57
0075	1	27.161	.925	72	61.451	149.69
0076	2	29.036	.925	72	33.449	153.00
0077	3	30.161	.925	72	6.266	267.50
0078	4	27.161	.700	72	29.103	154.73
0079	5	29.036	.700	72	19.482	94.82
0080	6	30.161	.700	72	.100	90.00
0081	7	27.161	.800	72	43.649	115.70
0082	8	29.036	.800	72	20.424	143.50
0083	9	30.161	.800	72	3.677	360.97
0084	10	27.161	.575	72	29.905	155.72
0085	11	29.036	.575	72	18.627	453.09
0086	12	30.161	.575	72	22.417	66.68
0087	1	27.161	.925	90	77.072	122.36
0088	2	29.036	.925	90	30.606	82.37
0089	3	30.161	.925	90	30.333	34.37
0090	4	27.161	.700	90	35.124	104.31
0091	5	29.036	.700	90	33.296	76.43
0092	6	30.161	.700	90	31.650	17.93
0093	7	27.161	.800	90	51.273	54.46
0094	8	29.036	.800	90	39.928	82.84
0095	9	30.161	.800	90	22.729	16.12
0096	10	27.161	.575	90	22.389	95.89
0097	11	29.036	.575	90	25.630	408.65
0098	12	30.161	.575	90	22.030	27.44
0099	1	27.161	.925	108	51.052	73.69
0100	2	29.036	.925	108	53.995	12.76
0101	3	30.161	.925	108	75.283	-4.10
0102	4	27.161	.700	108	47.485	54.56
0103	5	29.036	.700	108	50.178	20.44
0104	6	30.161	.700	108	53.985	-8.95
0105	7	27.161	.800	108	53.477	28.60
0106	8	29.036	.800	108	53.302	14.08
0107	9	30.161	.800	108	60.701	-10.61
0108	10	27.161	.575	108	27.524	59.90
0109	11	29.036	.575	108	45.730	375.33
0110	12	30.161	.575	108	48.522	346.52
0111	1	27.161	.925	126	34.147	94.92
0112	2	29.036	.925	126	41.417	331.21
0113	3	30.161	.925	126	79.846	319.72
0114	4	27.161	.700	126	35.190	45.75
0115	5	29.036	.700	126	45.195	349.79
0116	6	30.161	.700	126	58.516	315.17
0117	7	27.161	.800	126	38.305	42.32
0118	8	29.036	.800	126	41.785	-28.27
0119	9	30.161	.800	126	62.502	314.06

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0123

RUN # 70

DATE 9/ 8/82

MEASUREMENT LOCATION: UPSTREAM

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0125

KULITE NO.	KULITE (in.)	POSITION (r/r ₂)	AMPLITUDE (Voltsx10)	PHASE (deg.)
10	27.161	.575	126	21.938
11	29.036	.575	126	44.191
12	30.161	.575	126	47.396
1	27.161	.925	144	60.000
2	29.036	.925	144	.100
3	30.161	.925	144	44.426
4	27.161	.700	144	40.132
5	29.036	.700	144	15.434
6	30.161	.700	144	39.283
7	27.161	.800	144	46.391
8	29.036	.800	144	6.665
9	30.161	.800	144	40.626
10	27.161	.575	144	28.863
11	29.036	.575	144	28.966
12	30.161	.575	144	36.685
1	27.161	.925	162	74.708
2	29.036	.925	162	23.718
3	30.161	.925	162	25.493
4	27.161	.700	162	45.365
5	29.036	.700	162	19.085
6	30.161	.700	162	14.855
7	27.161	.800	162	60.045
8	29.036	.800	162	16.146
9	30.161	.800	162	10.461
10	27.161	.575	162	33.840
11	29.036	.575	162	18.914
12	30.161	.575	162	20.116
1	27.161	.925	180	47.465
2	29.036	.925	180	34.235
3	30.161	.925	180	26.602
4	27.161	.700	180	53.296
5	29.036	.700	180	21.134
6	30.161	.700	180	29.817
7	27.161	.800	180	55.217
8	29.036	.800	180	39.012
9	30.161	.800	180	23.702
10	27.161	.575	180	31.621
11	29.036	.575	180	28.153
12	30.161	.575	180	24.320
1	27.161	.925	198	20.232
2	29.036	.925	198	45.343
3	30.161	.925	198	66.302
4	27.161	.700	198	37.961
5	29.036	.700	198	35.839
6	30.161	.700	198	47.260
7	27.161	.800	198	40.239
8	29.036	.800	198	42.746
9	30.161	.800	198	56.004
10	27.161	.575	198	38.019
11	29.036	.575	198	25.424
12	30.161	.575	198	41.693
1	27.161	.925	216	22.535

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RUN # 70 DATE 9/ 8/82 MEASUREMENT LOCATION: UPSTREAM

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KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	AMPLITUDE (Voltsx10)	PHASE (deg.)		
		CIRCUM. (deg.)				
0190	2	29.036	.925	216	23.141	258.46
0191	3	30.161	.925	216	48.241	221.80
0192	4	27.161	.700	216	24.716	362.34
0193	5	29.036	.700	216	22.724	274.63
0194	6	30.161	.700	216	45.297	221.52
0195	7	27.161	.800	216	10.403	-52.68
0196	8	29.036	.800	216	40.995	265.59
0197	9	30.161	.800	216	38.972	225.78
0198	10	27.161	.575	216	21.877	352.24
0199	11	29.036	.575	216	35.616	267.53
0200	12	30.161	.575	216	49.025	227.56
0201	1	27.161	.925	234	50.545	359.21
0202	2	29.036	.925	234	28.121	-2.73
0203	3	30.161	.925	234	8.137	148.12
0204	4	27.161	.700	234	38.541	346.24
0205	5	29.036	.700	234	12.469	314.84
0206	6	30.161	.700	234	20.207	201.41
0207	7	27.161	.800	234	38.668	-43.36
0208	8	29.036	.800	234	17.140	-17.65
0209	9	30.161	.800	234	10.610	173.99
0210	10	27.161	.575	234	32.964	355.63
0211	11	29.036	.575	234	14.007	248.20
0212	12	30.161	.575	234	32.907	214.41
0213	1	27.161	.925	252	68.542	326.18
0214	2	29.036	.925	252	51.041	330.96
0215	3	30.161	.925	252	.100	90.00
0216	4	27.161	.700	252	37.880	-45.37
0217	5	29.036	.700	252	24.173	289.37
0218	6	30.161	.700	252	16.066	179.05
0219	7	27.161	.800	252	61.277	263.30
0220	8	29.036	.800	252	39.276	315.05
0221	9	30.161	.800	252	.100	90.00
0222	10	27.161	.575	252	18.801	342.61
0223	11	29.036	.575	252	22.125	592.54
0224	12	30.161	.575	252	29.599	201.43
0225	1	27.161	.925	270	82.356	295.42
0226	2	29.036	.925	270	42.142	278.81
0227	3	30.161	.925	270	27.217	220.94
0228	4	27.161	.700	270	53.840	282.41
0229	5	29.036	.700	270	35.588	252.43
0230	6	30.161	.700	270	48.369	199.40
0231	7	27.161	.800	270	37.975	240.67
0232	8	29.036	.800	270	41.590	253.46
0233	9	30.161	.800	270	19.827	214.24
0234	10	27.161	.575	270	26.102	296.63
0235	11	29.036	.575	270	39.614	565.38
0236	12	30.161	.575	270	43.192	195.18
0237	1	27.161	.925	288	52.957	-69.13
0238	2	29.036	.925	288	34.325	210.61
0239	3	30.161	.925	288	63.235	174.63
0240	4	27.161	.700	288	37.820	244.92
0241	5	29.036	.700	288	49.322	203.44

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RUN # 70 DATE 9/ 8/82 MEASUREMENT LOCATION: UPSTREAM

KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
6	30.161	.700	288	56.126	175.35
7	27.161	.800	288	49.992	214.10
8	29.036	.800	288	44.627	211.44
9	30.161	.800	288	46.081	171.89
10	27.161	.575	288	22.257	241.52
11	29.036	.575	288	54.684	556.98
12	30.161	.575	288	66.688	182.50
1	27.161	.925	306	36.525	284.17
2	29.036	.925	306	7.748	131.33
3	30.161	.925	306	52.490	113.90
4	27.161	.700	306	33.164	245.93
5	29.036	.700	306	36.995	158.42
6	30.161	.700	306	47.210	137.58
7	27.161	.800	306	29.496	218.52
8	29.036	.800	306	25.668	152.45
9	30.161	.800	306	40.577	128.98
10	27.161	.575	306	15.554	175.41
11	29.036	.575	306	48.259	520.55
12	30.161	.575	306	60.316	166.65
1	27.161	.925	324	62.973	274.25
2	29.036	.925	324	22.700	342.82
3	30.161	.925	324	39.678	74.58
4	27.161	.700	324	24.147	228.90
5	29.036	.700	324	20.056	168.14
6	30.161	.700	324	37.509	114.30
7	27.161	.800	324	34.347	199.50
8	29.036	.800	324	.100	90.00
9	30.161	.800	324	30.010	77.47
10	27.161	.575	324	9.499	220.35
11	29.036	.575	324	35.951	499.57
12	30.161	.575	324	49.100	136.99
1	27.161	.925	342	72.805	244.40
2	29.036	.925	342	30.087	266.74
3	30.161	.925	342	19.275	39.41
4	27.161	.700	342	47.154	214.31
5	29.036	.700	342	20.076	183.92
6	30.161	.700	342	33.567	109.04
7	27.161	.800	342	66.772	197.59
8	29.036	.800	342	15.177	251.70
9	30.161	.800	342	.19.225	83.04
10	27.161	.575	342	23.055	195.79
11	29.036	.575	342	35.147	507.33
12	30.161	.575	342	43.765	128.13

TEMP13 T=00004 IS ON CR AA USING 00072 BLKS R=0000

0001
 0002 PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM PAGE
 0003
 0004 RUN # 70 DATE 9/ 8/82 MEASUREMENT LOCATION: DOWNSTREAM
 0005
 0006 CONFIGURATION: HARDWALL FAN SPEED: 6000 rpm
 0007
 0008 TEMPERATURES (deg. F):
 0009 INLET (DRY) : 76->80
 0010 CHAMBER (DRY): 76->80
 0011 CHAMBER (WET): 71

DATA REDUCTION: FROM TAPE

KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
13	56.161	.925	0	61.635	385.75
14	58.036	.925	0	39.862	366.33
15	59.161	.925	0	24.495	305.04
16	56.161	.700	0	32.972	37.52
17	58.036	.700	0	40.717	-7.06
18	59.161	.700	0	43.053	-38.83
19	56.161	.800	0	55.776	28.96
20	58.036	.800	0	41.012	4.51
21	59.161	.800	0	.100	90.00
22	56.161	.575	0	25.647	22.42
23	58.036	.575	0	39.444	321.21
24	59.161	.575	0	25.479	353.33
13	56.161	.925	18	23.033	336.97
14	58.036	.925	18	23.095	337.10
15	59.161	.925	18	13.894	259.82
16	56.161	.700	18	11.271	343.16
17	58.036	.700	18	32.643	318.33
18	59.161	.700	18	30.818	299.89
19	56.161	.800	18	23.584	348.14
20	58.036	.800	18	31.708	333.58
21	59.161	.800	18	.100	90.00
22	56.161	.575	18	15.860	332.49
23	58.036	.575	18	33.602	308.88
24	59.161	.575	18	19.900	324.52
13	56.161	.925	36	14.784	345.86
14	58.036	.925	36	10.705	289.28
15	59.161	.925	36	20.489	213.33
16	56.161	.700	36	12.097	345.01
17	58.036	.700	36	27.366	294.36
18	59.161	.700	36	28.045	266.91
19	56.161	.800	36	14.700	-27.91
20	58.036	.800	36	19.259	285.55
21	59.161	.800	36	.100	90.00
22	56.161	.575	36	17.841	305.07
23	58.036	.575	36	29.340	270.77
24	59.161	.575	36	21.885	296.62
13	56.161	.925	54	43.278	350.48
14	58.036	.925	54	9.900	265.06
15	59.161	.925	54	40.065	195.12
16	56.161	.700	54	24.405	348.34
17	58.036	.700	54	28.079	272.46

0059

0060

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0063

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

RUN # 70 DATE 9/ 8/82 MEASUREMENT LOCATION: DOWNSTREAM

KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0068	18	59.161	.700	54	40.122
0069	19	56.161	.800	54	40.406
0070	20	58.036	.800	54	16.933
0071	21	59.161	.800	54	.100
0072	22	56.161	.575	54	33.708
0073	23	58.036	.575	54	35.573
0074	24	59.161	.575	54	21.866
0075	13	56.161	.925	72	65.843
0076	14	58.036	.925	72	18.829
0077	15	59.161	.925	72	30.905
0078	16	56.161	.700	72	35.258
0079	17	58.036	.700	72	32.675
0080	18	59.161	.700	72	45.786
0081	19	56.161	.800	72	54.989
0082	20	58.036	.800	72	24.368
0083	21	59.161	.800	72	.100
0084	22	56.161	.575	72	44.359
0085	23	58.036	.575	72	40.696
0086	24	59.161	.575	72	24.624
0087	13	56.161	.925	90	50.522
0088	14	58.036	.925	90	22.147
0089	15	59.161	.925	90	26.920
0090	16	56.161	.700	90	33.218
0091	17	58.036	.700	90	35.729
0092	18	59.161	.700	90	33.799
0093	19	56.161	.800	90	44.921
0094	20	58.036	.800	90	27.843
0095	21	59.161	.800	90	.100
0096	22	56.161	.575	90	34.942
0097	23	58.036	.575	90	34.142
0098	24	59.161	.575	90	26.539
0099	13	56.161	.925	108	38.609
0100	14	58.036	.925	108	21.008
0101	15	59.161	.925	108	22.591
0102	16	56.161	.700	108	21.038
0103	17	58.036	.700	108	31.384
0104	18	59.161	.700	108	26.039
0105	19	56.161	.800	108	31.508
0106	20	58.036	.800	108	26.794
0107	21	59.161	.800	108	.100
0108	22	56.161	.575	108	22.176
0109	23	58.036	.575	108	30.053
0110	24	59.161	.575	108	21.522
0111	13	56.161	.925	126	22.011
0112	14	58.036	.925	126	.11.523
0113	15	59.161	.925	126	13.938
0114	16	56.161	.700	126	7.561
0115	17	58.036	.700	126	26.863
0116	18	59.161	.700	126	23.675
0117	19	56.161	.800	126	17.480
0118	20	58.036	.800	126	19.327
0119	21	59.161	.800	126	.100

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0123
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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

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RUN # 70 DATE 9/ 8/82 MEASUREMENT LOCATION: DOWNSTREAM

KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r_2)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0129 22	56.161	.575	126	10.376	221.22
0130 23	58.036	.575	126	32.030	182.70
0131 24	59.161	.575	126	22.253	201.90
0132 13	56.161	.925	144	52.839	265.40
0133 14	58.036	.925	144	25.750	242.77
0134 15	59.161	.925	144	8.654	107.82
0135 16	56.161	.700	144	17.699	276.79
0136 17	58.036	.700	144	26.993	194.54
0137 18	59.161	.700	144	34.078	162.41
0138 19	56.161	.800	144	38.567	266.72
0139 20	58.036	.800	144	23.786	223.29
0140 21	59.161	.800	144	.100	90.00
0141 22	56.161	.575	144	9.554	250.40
0142 23	58.036	.575	144	39.963	161.52
0143 24	59.161	.575	144	19.861	186.24
0144 13	56.161	.925	162	69.052	236.40
0145 14	58.036	.925	162	39.052	219.23
0146 15	59.161	.925	162	12.930	126.37
0147 16	56.161	.700	162	28.960	251.26
0148 17	58.036	.700	162	32.468	184.53
0149 18	59.161	.700	162	46.726	148.26
0150 19	56.161	.800	162	54.795	231.03
0151 20	58.036	.800	162	38.460	201.39
0152 21	59.161	.800	162	.100	90.00
0153 22	56.161	.575	162	16.822	220.05
0154 23	58.036	.575	162	53.928	143.46
0155 24	59.161	.575	162	24.174	164.68
0156 13	56.161	.925	180	69.742	197.48
0157 14	58.036	.925	180	52.950	186.75
0158 15	59.161	.925	180	13.919	131.22
0159 16	56.161	.700	180	26.034	214.19
0160 17	58.036	.700	180	44.644	161.50
0161 18	59.161	.700	180	52.655	130.23
0162 19	56.161	.800	180	54.708	192.89
0163 20	58.036	.800	180	48.912	174.32
0164 21	59.161	.800	180	.100	90.00
0165 22	56.161	.575	180	13.551	190.42
0166 23	58.036	.575	180	55.990	120.57
0167 24	59.161	.575	180	29.171	147.53
0168 13	56.161	.925	198	43.078	172.55
0169 14	58.036	.925	198	47.439	171.53
0170 15	59.161	.925	198	16.015	142.93
0171 16	56.161	.700	198	8.922	214.46
0172 17	58.036	.700	198	40.276	140.57
0173 18	59.161	.700	198	47.808	121.50
0174 19	56.161	.800	198	32.317	173.24
0175 20	58.036	.800	198	44.291	153.34
0176 21	59.161	.800	198	.100	90.00
0177 22	56.161	.575	198	9.170	214.06
0178 23	58.036	.575	198	58.326	105.16
0179 24	59.161	.575	198	22.848	125.83
0180 13	56.161	.925	216	30.016	189.29

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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

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RUN # 70 DATE 9/ 8/82 MEASUREMENT LOCATION: DOWNSTREAM

KULITE NO.	KULITE (in.)	POSITION (r/r ₂)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0190	14	.925	216	32.796
0191	15	.925	216	10.004
0192	16	.700	216	17.893
0193	17	.700	216	26.454
0194	18	.700	216	40.441
0195	19	.800	216	25.994
0196	20	.800	216	30.146
0197	21	.800	216	.100
0198	22	.575	216	13.874
0199	23	.575	216	50.124
0200	24	.575	216	19.625
0201	13	.925	234	61.254
0202	14	.925	234	39.060
0203	15	.925	234	10.672
0204	16	.56.161	234	28.187
0205	17	.58.036	234	26.016
0206	18	.59.161	234	45.752
0207	19	.56.161	234	42.252
0208	20	.58.036	234	29.562
0209	21	.59.161	234	.100
0210	22	.56.161	234	21.997
0211	23	.58.036	234	53.881
0212	24	.59.161	234	18.831
0213	13	.56.161	252	93.856
0214	14	.58.036	252	53.097
0215	15	.59.161	252	20.121
0216	16	.56.161	252	32.087
0217	17	.58.036	252	30.115
0218	18	.59.161	252	55.042
0219	19	.56.161	252	65.689
0220	20	.58.036	252	42.691
0221	21	.59.161	252	.100
0222	22	.56.161	252	24.014
0223	23	.58.036	252	57.044
0224	24	.59.161	252	16.693
0225	13	.56.161	270	92.327
0226	14	.58.036	270	56.523
0227	15	.59.161	270	14.895
0228	16	.56.161	270	25.404
0229	17	.58.036	270	34.462
0230	18	.59.161	270	49.451
0231	19	.56.161	270	67.035
0232	20	.58.036	270	45.740
0233	21	.59.161	270	.100
0234	22	.56.161	270	7.797
0235	23	.58.036	270	50.457
0236	24	.59.161	270	21.039
0237	13	.56.161	288	45.448
0238	14	.58.036	288	36.581
0239	15	.59.161	288	.100
0240	16	.56.161	288	.100
0241	17	.58.036	288	29.057

0242

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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

RUN # 70 DATE 9/ 8/82 MEASUREMENT LOCATION: DOWNSTREAM

KULITE NO.	KULITE AXIAL (in.)	POSITION (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0251	18	59.161	.700	288	33.066
0252	19	56.161	.800	288	34.302
0253	20	58.036	.800	288	32.476
0254	21	59.161	.800	288	.100
0255	22	56.161	.575	288	9.359
0256	23	58.036	.575	288	42.930
0257	24	59.161	.575	288	18.779
0258	13	56.161	.925	306	19.729
0259	14	58.036	.925	306	20.496
0260	15	59.161	.925	306	8.136
0261	16	56.161	.700	306	8.334
0262	17	58.036	.700	306	18.578
0263	18	59.161	.700	306	23.076
0264	19	56.161	.800	306	11.367
0265	20	58.036	.800	306	15.015
0266	21	59.161	.800	306	.100
0267	22	56.161	.575	306	13.959
0268	23	58.036	.575	306	35.234
0269	24	59.161	.575	306	15.984
0270	13	56.161	.925	324	50.904
0271	14	58.036	.925	324	26.583
0272	15	59.161	.925	324	4.901
0273	16	56.161	.700	324	24.691
0274	17	58.036	.700	324	16.937
0275	18	59.161	.700	324	29.818
0276	19	56.161	.800	324	37.614
0277	20	58.036	.800	324	21.663
0278	21	59.161	.800	324	.100
0279	22	56.161	.575	324	7.732
0280	23	58.036	.575	324	35.102
0281	24	59.161	.575	324	13.445
0282	13	56.161	.925	342	78.673
0283	14	58.036	.925	342	39.417
0284	15	59.161	.925	342	22.109
0285	16	56.161	.700	342	36.985
0286	17	58.036	.700	342	28.658
0287	18	59.161	.700	342	42.736
0288	19	56.161	.800	342	61.836
0289	20	58.036	.800	342	32.813
0290	21	59.161	.800	342	.100
0291	22	56.161	.575	342	25.331
0292	23	58.036	.575	342	39.442
0293	24	59.161	.575	342	18.991

TEMP13 T=00004 IS ON CR AA USING 00072 BLKS R=0000

0001	PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM				PAGE
0002					
0003					
0004	RUN # 71	DATE 10/1/82	MEASUREMENT LOCATION: UPSTREAM		
0005					
0006	CONFIGURATION: TREATMENT		FAN SPEED: 7600 rpm		
0007					
0008	TEMPERATURES (deg. F):				
0009	INLET (DRY) : 74->80				
0010	CHAMBER (DRY) : 74->80				
0011	CHAMBER (WET) : 64(?)>70(?)				
0012					DATA REDUCTION: FROM TAPE
0013					
0014	KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0015					
0016					
0017	-----	-----	-----	-----	-----
0018	1	27.161	.925	0	8.759
0019	2	29.036	.925	0	19.612
0020	3	30.161	.925	0	21.958
0021	4	27.161	.700	0	17.479
0022	5	29.036	.700	0	8.647
0023	6	30.161	.700	0	8.359
0024	7	27.161	.800	0	7.833
0025	8	29.036	.800	0	11.802
0026	9	30.161	.800	0	10.962
0027	10	27.161	.575	0	23.458
0028	11	29.036	.575	0	12.868
0029	12	30.161	.575	0	8.122
0030	1	27.161	.925	18	51.410
0031	2	29.036	.925	18	95.072
0032	3	30.161	.925	18	117.365
0033	4	27.161	.700	18	26.465
0034	5	29.036	.700	18	35.950
0035	6	30.161	.700	18	30.540
0036	7	27.161	.800	18	14.604
0037	8	29.036	.800	18	61.674
0038	9	30.161	.800	18	59.870
0039	10	27.161	.575	18	22.938
0040	11	29.036	.575	18	11.278
0041	12	30.161	.575	18	26.990
0042	1	27.161	.925	36	90.099
0043	2	29.036	.925	36	58.796
0044	3	30.161	.925	36	58.491
0045	4	27.161	.700	36	20.853
0046	5	29.036	.700	36	49.809
0047	6	30.161	.700	36	.100
0048	7	27.161	.800	36	24.384
0049	8	29.036	.800	36	30.856
0050	9	30.161	.800	36	26.880
0051	10	27.161	.575	36	12.382
0052	11	29.036	.575	36	27.763
0053	12	30.161	.575	36	20.263
0054	1	27.161	.925	54	59.116
0055	2	29.036	.925	54	48.700
0056	3	30.161	.925	54	60.224
0057	4	27.161	.700	54	43.611
0058	5	29.036	.700	54	17.897

0059

0060

0061

0062

0063

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

RUN # 71 DATE 10/1/82 MEASUREMENT LOCATION: UPSTREAM

KULITE NO.	KULITE NO.	POSITION (in.)	RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0068	6	30.161	.700	54	21.094	34.93
0069	7	27.161	.800	54	13.406	-206.28
0070	8	29.036	.800	54	29.224	74.81
0071	9	30.161	.800	54	28.755	45.68
0072	10	27.161	.575	54	30.476	105.21
0073	11	29.036	.575	54	.100	90.00
0074	12	30.161	.575	54	16.490	72.59
0075	1	27.161	.925	72	62.994	171.77
0076	2	29.036	.925	72	24.654	197.56
0077	3	30.161	.925	72	25.289	156.62
0078	4	27.161	.700	72	39.790	172.44
0079	5	29.036	.700	72	.100	90.00
0080	6	30.161	.700	72	18.140	71.89
0081	7	27.161	.800	72	17.967	-131.64
0082	8	29.036	.800	72	8.150	177.76
0083	9	30.161	.800	72	9.641	102.74
0084	10	27.161	.575	72	19.759	115.11
0085	11	29.036	.575	72	19.285	76.89
0086	12	30.161	.575	72	12.031	372.49
0087	1	27.161	.925	90	62.179	288.69
0088	2	29.036	.925	90	61.231	107.71
0089	3	30.161	.925	90	35.632	198.03
0090	4	27.161	.700	90	45.714	320.65
0091	5	29.036	.700	90	9.718	296.60
0092	6	30.161	.700	90	14.996	386.91
0093	7	27.161	.800	90	23.840	18.02
0094	8	29.036	.800	90	24.249	300.56
0095	9	30.161	.800	90	27.905	296.09
0096	10	27.161	.575	90	28.542	39.77
0097	11	29.036	.575	90	9.860	23.86
0098	12	30.161	.575	90	7.703	-63.63
0099	1	27.161	.925	108	62.761	88.69
0100	2	29.036	.925	108	96.715	166.95
0101	3	30.161	.925	108	91.560	135.90
0102	4	27.161	.700	108	38.029	126.36
0103	5	29.036	.700	108	29.467	127.88
0104	6	30.161	.700	108	18.160	372.82
0105	7	27.161	.800	108	13.029	-140.17
0106	8	29.036	.800	108	47.247	167.12
0107	9	30.161	.800	108	40.382	140.02
0108	10	27.161	.575	108	25.466	78.84
0109	11	29.036	.575	108	15.560	73.32
0110	12	30.161	.575	108	12.759	24.20
0111	1	27.161	.925	126	42.900	216.11
0112	2	29.036	.925	126	31.464	198.26
0113	3	30.161	.925	126	51.662	189.45
0114	4	27.161	.700	126	13.858	179.18
0115	5	29.036	.700	126	15.117	339.64
0116	6	30.161	.700	126	4.988	106.10
0117	7	27.161	.800	126	14.362	-80.51
0118	8	29.036	.800	126	7.514	223.96
0119	9	30.161	.800	126	32.723	170.86

0120

0121

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

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0123

RUN # 71 DATE 10/1/82 MEASUREMENT LOCATION: UPSTREAM

0124

0125

KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
10	27.161	.575	126	34.171	79.60
11	29.036	.575	126	18.526	7.99
12	30.161	.575	126	19.597	2.89
1	27.161	.925	144	104.727	12.99
2	29.036	.925	144	87.740	348.60
3	30.161	.925	144	87.830	325.13
4	27.161	.700	144	96.120	367.34
5	29.036	.700	144	59.665	343.06
6	30.161	.700	144	60.175	313.71
7	27.161	.800	144	30.452	63.56
8	29.036	.800	144	61.796	349.79
9	30.161	.800	144	55.173	322.18
10	27.161	.575	144	72.025	369.45
11	29.036	.575	144	47.136	-15.18
12	30.161	.575	144	39.728	317.79
1	27.161	.925	162	44.680	144.97
2	29.036	.925	162	65.074	169.40
3	30.161	.925	162	73.628	137.83
4	27.161	.700	162	11.470	96.49
5	29.036	.700	162	25.007	219.53
6	30.161	.700	162	18.092	196.63
7	27.161	.800	162	9.139	-178.97
8	29.036	.800	162	28.440	204.47
9	30.161	.800	162	24.653	177.52
10	27.161	.575	162	34.435	330.75
11	29.036	.575	162	42.493	-154.99
12	30.161	.575	162	21.199	253.72
1	27.161	.925	180	109.290	197.55
2	29.036	.925	180	78.688	197.52
3	30.161	.925	180	93.415	158.19
4	27.161	.700	180	62.217	60.51
5	29.036	.700	180	62.183	206.54
6	30.161	.700	180	40.510	72.35
7	27.161	.800	180	36.271	-70.98
8	29.036	.800	180	50.501	196.14
9	30.161	.800	180	64.784	133.78
10	27.161	.575	180	52.369	66.22
11	29.036	.575	180	42.845	-109.32
12	30.161	.575	180	35.970	177.17
1	27.161	.925	198	36.402	-29.35
2	29.036	.925	198	70.997	65.61
3	30.161	.925	198	59.209	390.56
4	27.161	.700	198	27.673	309.13
5	29.036	.700	198	18.131	44.34
6	30.161	.700	198	32.705	43.90
7	27.161	.800	198	16.356	-322.87
8	29.036	.800	198	27.228	76.00
9	30.161	.800	198	24.901	58.48
10	27.161	.575	198	49.101	284.50
11	29.036	.575	198	22.100	211.43
12	30.161	.575	198	11.235	126.03
1	27.161	.925	216	73.943	138.95

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RUN # 71 DATE 10/1/82 MEASUREMENT LOCATION: UPSTREAM

0186	KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r_2)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0187	2	29.036	.925	216	55.844	124.12
0188	3	30.161	.925	216	42.921	91.12
0189	4	27.161	.700	216	60.999	166.67
0190	5	29.036	.700	216	14.105	163.10
0191	6	30.161	.700	216	25.643	106.89
0192	7	27.161	.800	216	25.015	-246.22
0193	8	29.036	.800	216	12.440	153.27
0194	9	30.161	.800	216	39.564	112.94
0195	10	27.161	.575	216	38.287	225.02
0196	11	29.036	.575	216	30.883	-142.23
0197	12	30.161	.575	216	58.525	130.89
0198	1	27.161	.925	234	35.658	183.75
0199	2	29.036	.925	234	29.445	261.92
0200	3	30.161	.925	234	20.006	239.64
0201	4	27.161	.700	234	68.923	253.43
0202	5	29.036	.700	234	33.592	240.50
0203	6	30.161	.700	234	24.235	247.98
0204	7	27.161	.800	234	17.245	-49.73
0205	8	29.036	.800	234	31.929	66.49
0206	9	30.161	.800	234	8.628	146.73
0207	10	27.161	.575	234	65.383	242.25
0208	11	29.036	.575	234	42.893	-139.17
0209	12	30.161	.575	234	39.735	68.55
0210	1	27.161	.925	252	63.668	284.51
0211	2	29.036	.925	252	37.675	31.76
0212	3	30.161	.925	252	34.955	-10.85
0213	4	27.161	.700	252	13.351	207.96
0214	5	29.036	.700	252	13.767	215.90
0215	6	30.161	.700	252	9.472	218.14
0216	7	27.161	.800	252	16.330	66.71
0217	8	29.036	.800	252	11.059	25.88
0218	9	30.161	.800	252	6.698	197.28
0219	10	27.161	.575	252	30.225	330.02
0220	11	29.036	.575	252	20.016	-151.31
0221	12	30.161	.575	252	9.539	179.36
0222	1	27.161	.925	270	45.610	312.22
0223	2	29.036	.925	270	30.180	96.98
0224	3	30.161	.925	270	12.483	216.56
0225	4	27.161	.700	270	11.208	-77.37
0226	5	29.036	.700	270	7.948	182.04
0227	6	30.161	.700	270	20.287	249.20
0228	7	27.161	.800	270	13.282	-190.95
0229	8	29.036	.800	270	32.449	156.67
0230	9	30.161	.800	270	11.317	161.93
0231	10	27.161	.575	270	32.994	175.46
0232	11	29.036	.575	270	62.489	-145.22
0233	12	30.161	.575	270	14.021	23.48
0234	1	27.161	.925	288	67.193	338.78
0235	2	29.036	.925	288	66.879	-10.99
0236	3	30.161	.925	288	40.289	303.70
0237	4	27.161	.700	288	22.124	266.54
0238	5	29.036	.700	288	8.721	306.42

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RUN # 71 DATE 10/1/82 MEASUREMENT LOCATION: UPSTREAM

KULITE NO.	KULITE AXIAL (in.)	POSITION (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
251	6	30.161	.700	288	15.620
252	7	27.161	.800	288	11.876
253	8	29.036	.800	288	27.030
254	9	30.161	.800	288	26.382
255	10	27.161	.575	288	27.100
256	11	29.036	.575	288	23.505
257	12	30.161	.575	288	10.145
258	1	27.161	.925	306	36.100
259	2	29.036	.925	306	38.372
260	3	30.161	.925	306	62.850
261	4	27.161	.700	306	26.874
262	5	29.036	.700	306	27.359
263	6	30.161	.700	306	17.081
264	7	27.161	.800	306	15.936
265	8	29.036	.800	306	32.879
266	9	30.161	.800	306	47.509
267	10	27.161	.575	306	40.680
268	11	29.036	.575	306	31.294
269	12	30.161	.575	306	7.805
270	1	27.161	.925	324	100.245
271	2	29.036	.925	324	39.595
272	3	30.161	.925	324	49.444
273	4	27.161	.700	324	67.264
274	5	29.036	.700	324	47.600
275	6	30.161	.700	324	32.253
276	7	27.161	.800	324	28.607
277	8	29.036	.800	324	48.402
278	9	30.161	.800	324	36.287
279	10	27.161	.575	324	55.505
280	11	29.036	.575	324	40.592
281	12	30.161	.575	324	29.970
282	1	27.161	.925	342	63.054
283	2	29.036	.925	342	33.776
284	3	30.161	.925	342	31.271
285	4	27.161	.700	342	26.084
286	5	29.036	.700	342	4.843
287	6	30.161	.700	342	14.202
288	7	27.161	.800	342	15.170
289	8	29.036	.800	342	36.605
290	9	30.161	.800	342	15.531
291	10	27.161	.575	342	33.601
292	11	29.036	.575	342	17.841
293	12	30.161	.575	342	44.696

TEMP13 T=00004 IS ON CR AA USING 00072 BLKS R=0000

0001	PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM				PAGE	
0002						
0003						
0004	RUN # 7J	DATE 10/1/82	MEASUREMENT LOCATION: DOWNSTREAM			
0005						
0006	CONFIGURATION: TREATMENT		FAN SPEED: 7600 rpm			
0007						
0008	TEMPERATURES (deg. F):					
0009	INLET (DRY) : 74->80					
0010	CHAMBER (DRY): 74->80					
0011	CHAMBER (WET): 64(?)>70(?)					
0012					DATA REDUCTION: FROM TAPE	
0013						
0014	KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r_2)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0015	-----	-----	-----	-----	-----	-----
0016	13	56.161	.925	0	3.688	60.16
0017	14	58.036	.925	0	2.075	171.77
0018	15	59.161	.925	0	4.649	293.77
0019	16	56.161	.700	0	.100	90.00
0020	17	58.036	.700	0	4.056	32.21
0021	18	59.161	.700	0	2.476	319.54
0022	19	56.161	.800	0	5.291	153.04
0023	20	58.036	.800	0	3.147	376.79
0024	21	59.161	.800	0	10.000	90.00
0025	22	56.161	.575	0	.100	90.00
0026	23	58.036	.575	0	7.932	155.50
0027	24	59.161	.575	0	7.192	69.92
0028	13	56.161	.925	18	8.524	152.59
0029	14	58.036	.925	18	7.703	236.19
0030	15	59.161	.925	18	11.219	290.07
0031	16	56.161	.700	18	6.267	86.31
0032	17	58.036	.700	18	3.137	43.33
0033	18	59.161	.700	18	3.574	347.52
0034	19	56.161	.800	18	4.983	60.50
0035	20	58.036	.800	18	.100	90.00
0036	21	59.161	.800	18	.100	90.00
0037	22	56.161	.575	18	.100	90.00
0038	23	58.036	.575	18	13.027	17.38
0039	24	59.161	.575	18	6.557	-5.31
0040	13	56.161	.925	36	8.278	137.52
0041	14	58.036	.925	36	8.345	303.66
0042	15	59.161	.925	36	4.382	294.34
0043	16	56.161	.700	36	.100	90.00
0044	17	58.036	.700	36	.100	90.00
0045	18	59.161	.700	36	.100	90.00
0046	19	56.161	.800	36	4.929	119.10
0047	20	58.036	.800	36	2.824	210.92
0048	21	59.161	.800	36	10.000	90.00
0049	22	56.161	.575	36	.100	90.00
0050	23	58.036	.575	36	8.651	97.90
0051	24	59.161	.575	36	.430	323.87
0052	13	56.161	.925	54	4.662	290.40
0053	14	58.036	.925	54	.100	90.00
0054	15	59.161	.925	54	5.042	146.81
0055	16	56.161	.700	54	.100	90.00
0056	17	58.036	.700	54	.100	90.00
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RUN # 71 DATE 10/1/82 MEASUREMENT LOCATION: DOWNSTREAM

KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0068	18	59.161	.700	54 .100	90.00
0069	19	56.161	.800	54 .100	90.00
0070	20	58.036	.800	54 .100	90.00
0071	21	59.161	.800	54 .100	90.00
0072	22	56.161	.575	54 .100	90.00
0073	23	58.036	.575	54 3.312	366.26
0074	24	59.161	.575	54 3.311	243.30
0075	13	56.161	.925	72 7.677	109.71
0076	14	58.036	.925	72 3.189	22.58
0077	15	59.161	.925	72 .100	90.00
0078	16	56.161	.700	72 .100	90.00
0079	17	58.036	.700	72 .100	90.00
0080	18	59.161	.700	72 .100	90.00
0081	19	56.161	.800	72 .100	90.00
0082	20	58.036	.800	72 .100	90.00
0083	21	59.161	.800	72 .100	90.00
0084	22	56.161	.575	72 5.067	52.08
0085	23	58.036	.575	72 3.573	192.18
0086	24	59.161	.575	72 .100	90.00
0087	13	56.161	.925	90 8.618	227.88
0088	14	58.036	.925	90 .100	90.00
0089	15	59.161	.925	90 6.014	95.81
0090	16	56.161	.700	90 .100	90.00
0091	17	58.036	.700	90 3.921	99.63
0092	18	59.161	.700	90 4.434	63.88
0093	19	56.161	.800	90 6.345	233.98
0094	20	58.036	.800	90 4.701	114.89
0095	21	59.161	.800	90 10.000	90.00
0096	22	56.161	.575	90 3.641	130.53
0097	23	58.036	.575	90 6.539	193.27
0098	24	59.161	.575	90 6.156	168.13
0099	13	56.161	.925	108 9.934	85.05
0100	14	58.036	.925	108 3.110	203.17
0101	15	59.161	.925	108 10.111	124.80
0102	16	56.161	.700	108 .100	90.00
0103	17	58.036	.700	108 4.233	5.99
0104	18	59.161	.700	108 4.709	241.43
0105	19	56.161	.800	108 2.098	267.74
0106	20	58.036	.800	108 4.322	128.92
0107	21	59.161	.800	108 10.000	90.00
0108	22	56.161	.575	108 3.906	402.08
0109	23	58.036	.575	108 4.573	143.11
0110	24	59.161	.575	108 2.928	148.92
0111	13	56.161	.925	126 .100	90.00
0112	14	58.036	.925	126 7.079	80.09
0113	15	59.161	.925	126 4.557	48.37
0114	16	56.161	.700	126 .100	90.00
0115	17	58.036	.700	126 3.271	119.50
0116	18	59.161	.700	126 7.116	335.10
0117	19	56.161	.800	126 .100	90.00
0118	20	58.036	.800	126 .100	90.00
0119	21	59.161	.800	126 .100	90.00

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0123 RUN # 71 DATE 10/1/82 MEASUREMENT LOCATION: DOWNSTREAM

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0125	KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0129	22	56.161	.575	126	2.950	367.41
0130	23	58.036	.575	126	-1.635	253.54
0131	24	59.161	.575	126	2.339	166.96
0132	13	56.161	.925	144	9.202	49.77
0133	14	58.036	.925	144	12.585	127.79
0134	15	59.161	.925	144	12.476	102.40
0135	16	56.161	.700	144	.100	90.00
0136	17	58.036	.700	144	.100	90.00
0137	18	59.161	.700	144	4.423	13.03
0138	19	56.161	.800	144	4.509	148.55
0139	20	58.036	.800	144	5.623	125.97
0140	21	59.161	.800	144	10.000	90.00
0141	22	56.161	.575	144	4.421	337.21
0142	23	58.036	.575	144	4.921	87.07
0143	24	59.161	.575	144	5.537	-4.76
0144	13	56.161	.925	162	7.360	136.55
0145	14	58.036	.925	162	6.706	152.98
0146	15	59.161	.925	162	7.467	123.33
0147	16	56.161	.700	162	5.465	239.74
0148	17	58.036	.700	162	6.581	186.90
0149	18	59.161	.700	162	5.037	274.02
0150	19	56.161	.800	162	4.592	348.17
0151	20	58.036	.800	162	9.061	209.43
0152	21	59.161	.800	162	10.000	90.00
0153	22	56.161	.575	162	4.812	210.59
0154	23	58.036	.575	162	2.521	105.07
0155	24	59.161	.575	162	1.956	341.51
0156	13	56.161	.925	180	8.817	257.51
0157	14	58.036	.925	180	11.778	236.11
0158	15	59.161	.925	180	3.960	242.74
0159	16	56.161	.700	180	.511	400.79
0160	17	58.036	.700	180	5.411	202.52
0161	18	59.161	.700	180	9.805	136.17
0162	19	56.161	.800	180	6.889	263.87
0163	20	58.036	.800	180	7.953	218.64
0164	21	59.161	.800	180	10.000	90.00
0165	22	56.161	.575	180	4.668	228.57
0166	23	58.036	.575	180	9.405	123.94
0167	24	59.161	.575	180	4.459	152.01
0168	13	56.161	.925	198	6.241	211.91
0169	14	58.036	.925	198	11.672	176.19
0170	15	59.161	.925	198	6.274	121.40
0171	16	56.161	.700	198	5.346	261.17
0172	17	58.036	.700	198	4.984	56.26
0173	18	59.161	.700	198	10.011	93.98
0174	19	56.161	.800	198	5.470	277.57
0175	20	58.036	.800	198	5.976	112.61
0176	21	59.161	.800	198	10.000	90.00
0177	22	56.161	.575	198	6.783	146.36
0178	23	58.036	.575	198	15.504	40.85
0179	24	59.161	.575	198	5.200	166.15
0180	13	56.161	.925	216	6.460	275.96

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RUN # 71 DATE 10/1/82 MEASUREMENT LOCATION: DOWNSTREAM

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KULITE NO.	KULITE NO.	POSITION AXIAL (in.)	POSITION RADIAL (r/r ₂)	POSITION CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0190	14	58.036	.925	216	6.389	188.73
0191	15	59.161	.925	216	6.837	160.34
0192	16	56.161	.700	216	3.192	265.20
0193	17	58.036	.700	216	4.381	42.17
0194	18	59.161	.700	216	5.948	237.76
0195	19	56.161	.800	216	7.901	217.08
0196	20	58.036	.800	216	4.319	160.99
0197	21	59.161	.800	216	10.000	90.00
0198	22	56.161	.575	216	-1.118	240.39
0199	23	58.036	.575	216	6.424	185.10
0200	24	59.161	.575	216	5.976	221.55
0201	13	56.161	.925	234	1.843	245.13
0202	14	58.036	.925	234	2.935	192.21
0203	15	59.161	.925	234	1.919	78.96
0204	16	56.161	.700	234	.100	90.00
0205	17	58.036	.700	234	8.240	235.79
0206	18	59.161	.700	234	5.095	244.26
0207	19	56.161	.800	234	.100	90.00
0208	20	58.036	.800	234	3.778	326.44
0209	21	59.161	.800	234	10.000	90.00
0210	22	56.161	.575	234	5.768	279.12
0211	23	58.036	.575	234	10.376	248.86
0212	24	59.161	.575	234	11.931	242.39
0213	13	56.161	.925	252	-3.472	189.52
0214	14	58.036	.925	252	12.419	117.97
0215	15	59.161	.925	252	13.139	92.96
0216	16	56.161	.700	252	.100	90.00
0217	17	58.036	.700	252	.100	90.00
0218	18	59.161	.700	252	.100	90.00
0219	19	56.161	.800	252	4.185	181.45
0220	20	58.036	.800	252	7.149	118.25
0221	21	59.161	.800	252	10.000	90.00
0222	22	56.161	.575	252	6.741	276.67
0223	23	58.036	.575	252	3.845	245.72
0224	24	59.161	.575	252	.3.780	254.02
0225	13	56.161	.925	270	8.360	157.94
0226	14	58.036	.925	270	13.780	123.11
0227	15	59.161	.925	270	4.592	54.23
0228	16	56.161	.700	270	.100	90.00
0229	17	58.036	.700	270	8.161	210.57
0230	18	59.161	.700	270	10.329	52.93
0231	19	56.161	.800	270	8.622	147.32
0232	20	58.036	.800	270	15.344	98.93
0233	21	59.161	.800	270	10.000	90.00
0234	22	56.161	.575	270	2.801	270.34
0235	23	58.036	.575	270	4.222	159.03
0236	24	59.161	.575	270	4.429	75.87
0237	13	56.161	.925	288	9.485	264.83
0238	14	58.036	.925	288	9.154	74.50
0239	15	59.161	.925	288	13.896	37.24
0240	16	56.161	.700	288	2.916	296.04
0241	17	58.036	.700	288	9.922	96.72

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0245

0246

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

RUN # 71

DATE 10/1/82

MEASUREMENT LOCATION: DOWNSTREAM

0247	KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0250						
0251	18	59.161	.700	288	12.096	76.28
0252	19	56.161	.800	288	10.197	51.27
0253	20	58.036	.800	288	12.569	83.82
0254	21	59.161	.800	288	10.000	90.00
0255	22	56.161	.575	288	-.874	250.11
0256	23	58.036	.575	288	8.115	73.04
0257	24	59.161	.575	288	8.701	83.20
0258	13	56.161	.925	306	.100	90.00
0259	14	58.036	.925	306	4.325	45.79
0260	15	59.161	.925	306	5.982	80.00
0261	16	56.161	.700	306	.100	90.00
0262	17	58.036	.700	306	.100	90.00
0263	18	59.161	.700	306	.100	90.00
0264	19	56.161	.800	306	4.224	195.96
0265	20	58.036	.800	306	4.712	367.76
0266	21	59.161	.800	306	10.000	90.00
0267	22	56.161	.575	306	4.578	194.59
0268	23	58.036	.575	306	3.860	131.93
0269	24	59.161	.575	306	.528	104.49
0270	13	56.161	.925	324	8.477	335.71
0271	14	58.036	.925	324	8.215	290.75
0272	15	59.161	.925	324	8.978	262.79
0273	16	56.161	.700	324	.100	90.00
0274	17	58.036	.700	324	3.911	177.74
0275	18	59.161	.700	324	4.233	279.41
0276	19	56.161	.800	324	2.662	320.11
0277	20	58.036	.800	324	7.626	285.71
0278	21	59.161	.800	324	10.000	90.00
0279	22	56.161	.575	324	6.579	181.76
0280	23	58.036	.575	324	2.539	180.28
0281	24	59.161	.575	324	6.420	231.28
0282	13	56.161	.925	342	5.756	-1.96
0283	14	58.036	.925	342	4.371	327.67
0284	15	59.161	.925	342	2.312	35.90
0285	16	56.161	.700	342	.100	90.00
0286	17	58.036	.700	342	.100	90.00
0287	18	59.161	.700	342	.100	90.00
0288	19	56.161	.800	342	.100	90.00
0289	20	58.036	.800	342	3.832	314.77
0290	21	59.161	.800	342	10.000	90.00
0291	22	56.161	.575	342	4.675	113.71
0292	23	58.036	.575	342	.100	90.00
0293	24	59.161	.575	342	3.866	191.10

TEMP13 T=00004 IS ON CR AA USING 00072 BLKS R=0000

0001
 0002 PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM PAGE
 0003
 0004 RUN # 73 DATE 10/5/82 MEASUREMENT LOCATION: UPSTREAM
 0005
 0006 CONFIGURATION: TREATMENT FAN SPEED: 6000 rpm
 0007

0008 TEMPERATURES (deg. F):

0009 INLET (DRY) : 75
 0010 CHAMBER (DRY) : 75
 0011 CHAMBER (WET) : 64(?)

0012 DATA REDUCTION: FROM TAPE
 0013

KULITE NO.	KULITE AXIAL (in.)	POSITION (r/r ₂)	AMPLITUDE (Voltsx10)	PHASE (deg.)
1	27.161	.925	36.763	177.51
2	29.036	.925	37.473	136.95
3	30.161	.925	27.312	115.35
4	27.161	.700	53.799	177.20
5	29.036	.700	31.095	145.84
6	30.161	.700	38.545	88.17
7	27.161	.800	62.679	170.23
8	29.036	.800	35.673	152.62
9	30.161	.800	25.146	103.67
10	27.161	.575	43.384	176.25
11	29.036	.575	23.263	307.64
12	30.161	.575	12.486	82.03
1	27.161	.925	44.311	118.04
2	29.036	.925	50.026	91.81
3	30.161	.925	26.940	69.54
4	27.161	.700	50.528	132.50
5	29.036	.700	33.305	95.77
6	30.161	.700	34.812	61.26
7	27.161	.800	61.419	117.95
8	29.036	.800	42.332	98.08
9	30.161	.800	18.352	63.88
10	27.161	.575	29.666	140.39
11	29.036	.575	24.393	270.65
12	30.161	.575	24.263	44.48
1	27.161	.925	23.528	92.83
2	29.036	.925	39.874	58.19
3	30.161	.925	38.543	27.08
4	27.161	.700	.100	90.03
5	29.036	.700	37.728	46.55
6	30.161	.700	25.784	27.49
7	27.161	.800	36.627	77.49
8	29.036	.800	40.426	50.29
9	30.161	.800	20.677	22.91
10	27.161	.575	23.287	122.93
11	29.036	.575	25.971	250.14
12	30.161	.575	30.310	375.67
1	27.161	.925	10.089	206.07
2	29.036	.925	22.442	35.33
3	30.161	.925	22.757	23.21
4	27.161	.700	26.709	167.77
5	29.036	.700	18.507	68.51

0059

0060

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

0061

0062

RUN # 73

DATE 10/5/82

MEASUREMENT LOCATION: UPSTREAM

0063

0064

KULITE

KULITE

POSITION

AMPLITUDE

PHASE

0065

NO.

AXIAL

RADIAL
(r/r_2)CIRCUM.
(deg.)

(Voltsx10)

(deg.)

0066

0067

0068

6

30.161

.700

54

42.023

21.01

0069

7

27.161

.800

54

15.049

180.26

0070

8

29.036

.800

54

18.286

48.73

0071

9

30.161

.800

54

19.109

382.45

0072

10

27.161

.575

54

29.100

137.51

0073

11

29.036

.575

54

8.087

241.98

0074

12

30.161

.575

54

25.721

38.42

0075

1

27.161

.925

72

28.855

156.03

0076

2

29.036

.925

72

22.410

91.17

0077

3

30.161

.925

72

15.906

57.31

0078

4

27.161

.700

72

29.768

158.02

0079

5

29.036

.700

72

27.117

74.34

0080

6

30.161

.700

72

17.872

73.57

0081

7

27.161

.800

72

40.998

145.32

0082

8

29.036

.800

72

22.928

85.32

0083

9

30.161

.800

72

13.167

61.43

0084

10

27.161

.575

72

38.035

141.10

0085

11

29.036

.575

72

23.945

263.63

0086

12

30.161

.575

72

18.078

58.26

0087

1

27.161

.925

90

42.318

111.00

0088

2

29.036

.925

90

41.093

33.23

0089

3

30.161

.925

90

39.662

369.82

0090

4

27.161

.700

90

59.260

93.78

0091

5

29.036

.700

90

36.814

65.66

0092

6

30.161

.700

90

39.589

16.22

0093

7

27.161

.800

90

65.631

75.43

0094

8

29.036

.800

90

47.568

55.52

0095

9

30.161

.800

90

20.237

18.49

0096

10

27.161

.575

90

42.592

92.40

0097

11

29.036

.575

90

30.416

244.19

0098

12

30.161

.575

90

8.416

66.23

0099

1

27.161

.925

108

46.836

21.73

0100

2

29.036

.925

108

68.365

-13.97

0101

3

30.161

.925

108

77.752

326.06

0102

4

27.161

.700

108

77.732

46.76

0103

5

29.036

.700

108

44.075

13.73

0104

6

30.161

.700

108

48.929

-27.43

0105

7

27.161

.800

108

81.316

41.10

0106

8

29.036

.800

108

58.630

4.21

0107

9

30.161

.800

108

45.682

332.15

0108

10

27.161

.575

108

44.257

63.14

0109

11

29.036

.575

108

37.037

212.77

0110

12

30.161

.575

108

18.107

332.86

0111

1

27.161

.925

126

19.845

355.52

0112

2

29.036

.925

126</div

0120

0121

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

0122

0123

RUN # 73

DATE 10/5/82

MEASUREMENT LOCATION: UPSTREAM

0124

0125

KULITE NO.	KULITE (in.)	POSITION r/r_2	AMPLITUDE (Voltsx10)	PHASE (deg.)
10	27.161	.575	126	34.477
11	29.036	.575	126	37.261
12	30.161	.575	126	17.479
1	27.161	.925	144	21.816
2	29.036	.925	144	26.892
3	30.161	.925	144	37.878
4	27.161	.700	144	47.534
5	29.036	.700	144	26.478
6	30.161	.700	144	46.688
7	27.161	.800	144	37.127
8	29.036	.800	144	29.477
9	30.161	.800	144	29.270
10	27.161	.575	144	29.716
11	29.036	.575	144	29.362
12	30.161	.575	144	21.557
1	27.161	.925	162	44.539
2	29.036	.925	162	24.422
3	30.161	.925	162	22.722
4	27.161	.700	162	40.852
5	29.036	.700	162	32.844
6	30.161	.700	162	17.838
7	27.161	.800	162	38.481
8	29.036	.800	162	28.085
9	30.161	.800	162	10.146
10	27.161	.575	162	29.963
11	29.036	.575	162	36.191
12	30.161	.575	162	18.681
1	27.161	.925	180	16.850
2	29.036	.925	180	37.326
3	30.161	.925	180	29.030
4	27.161	.700	180	55.092
5	29.036	.700	180	35.056
6	30.161	.700	180	51.791
7	27.161	.800	180	51.618
8	29.036	.800	180	49.311
9	30.161	.800	180	24.027
10	27.161	.575	180	36.871
11	29.036	.575	180	55.227
12	30.161	.575	180	28.124
1	27.161	.925	198	.100
2	29.036	.925	198	44.286
3	30.161	.925	198	60.150
4	27.161	.700	198	68.922
5	29.036	.700	198	51.714
6	30.161	.700	198	57.727
7	27.161	.800	198	54.483
8	29.036	.800	198	44.648
9	30.161	.800	198	40.688
10	27.161	.575	198	51.435
11	29.036	.575	198	56.646
12	30.161	.575	198	43.825
1	27.161	.925	216	8.612

0181

0182

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

0183

0184

RUN # 73

DATE 10/5/82

MEASUREMENT LOCATION: UPSTREAM

0185

0186

KULITE NO.	KULITE NO.	AXIAL (in.)	RADIAL (r/r_2)	POSITION (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0190	2	29.036	.925	216	26.718	246.22
0191	3	30.161	.925	216	45.302	215.47
0192	4	27.161	.700	216	28.204	-41.25
0193	5	29.036	.700	216	48.784	288.38
0194	6	30.161	.700	216	70.383	244.86
0195	7	27.161	.800	216	16.987	310.23
0196	8	29.036	.800	216	48.920	267.12
0197	9	30.161	.800	216	26.259	220.93
0198	10	27.161	.575	216	40.272	315.30
0199	11	29.036	.575	216	66.754	105.33
0200	12	30.161	.575	216	34.245	269.13
0201	1	27.161	.925	234	33.262	32.02
0202	2	29.036	.925	234	17.432	285.82
0203	3	30.161	.925	234	18.665	232.93
0204	4	27.161	.700	234	55.684	346.00
0205	5	29.036	.700	234	32.435	277.68
0206	6	30.161	.700	234	49.725	252.84
0207	7	27.161	.800	234	48.035	8.81
0208	8	29.036	.800	234	22.160	278.52
0209	9	30.161	.800	234	22.578	252.34
0210	10	27.161	.575	234	38.209	314.85
0211	11	29.036	.575	234	47.525	95.87
0212	12	30.161	.575	234	37.448	263.30
0213	1	27.161	.925	252	30.901	-13.17
0214	2	29.036	.925	252	24.817	275.66
0215	3	30.161	.925	252	21.749	237.69
0216	4	27.161	.700	252	34.262	313.89
0217	5	29.036	.700	252	41.221	253.14
0218	6	30.161	.700	252	40.965	226.05
0219	7	27.161	.800	252	51.446	330.73
0220	8	29.036	.800	252	32.086	273.96
0221	9	30.161	.800	252	30.732	231.16
0222	10	27.161	.575	252	23.931	293.11
0223	11	29.036	.575	252	44.716	67.93
0224	12	30.161	.575	252	30.037	237.28
0225	1	27.161	.925	270	57.456	310.03
0226	2	29.036	.925	270	35.131	233.05
0227	3	30.161	.925	270	34.309	207.73
0228	4	27.161	.700	270	72.152	277.19
0229	5	29.036	.700	270	39.047	239.23
0230	6	30.161	.700	270	81.031	196.16
0231	7	27.161	.800	270	53.816	277.22
0232	8	29.036	.800	270	47.043	223.96
0233	9	30.161	.800	270	23.361	201.54
0234	10	27.161	.575	270	33.911	254.35
0235	11	29.036	.575	270	53.646	25.88
0236	12	30.161	.575	270	34.516	179.57
0237	1	27.161	.925	288	50.477	287.68
0238	2	29.036	.925	288	34.947	205.00
0239	3	30.161	.925	288	49.857	158.10
0240	4	27.161	.700	288	74.603	237.57
0241	5	29.036	.700	288	50.936	201.21

0242

0243

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

0244

0245

RUN # 73

DATE 10/5/82

MEASUREMENT LOCATION: UPSTREAM

0246

0247

KULITE

KULITE

POSITION

AMPLITUDE

PHASE

0248

NO.

AXIAL

RADIAL

CIRCUM.

(Voltsx10)

(deg.)

0249

(in.)

(r/r₂)

(deg.)

0250

0251

6

30.161

.700

288

69.807

165.09

0252

7

27.161

.800

288

64.423

230.17

0253

8

29.036

.800

288

46.142

196.88

0254

9

30.161

.800

288

34.172

153.65

0255

10

27.161

.575

288

44.698

217.97

0256

11

29.036

.575

288

53.567

7.24

0257

12

30.161

.575

288

54.189

156.63

0258

1

27.161

.925

306

21.736

262.45

0259

2

29.036

.925

306

23.935

168.41

0260

3

30.161

.925

306

26.952

110.68

0261

4

27.161

.700

306

57.586

229.76

0262

5

29.036

.700

306

44.523

165.75

0263

6

30.161

.700

306

60.290

130.69

0264

7

27.161

.800

306

41.077

211.38

0265

8

29.036

.800

306

37.912

159.96

0266

9

30.161

.800

306

20.811

124.15

0267

10

27.161

.575

306

42.909

190.86

0268

11

29.036

.575

306

50.482

-26.08

0269

12

30.161

.575

306

47.942

140.26

0270

1

27.161

.925

324

26.484

267.11

0271

2

29.036

.925

324

10.236

163.20

0272

3

30.161

.925

324

22.667

103.33

0273

4

27.161

.700

324

41.590

207.96

0274

5

29.036

.700

324

34.505

169.60

0275

6

30.161

.700

324

53.563

126.91

0276

7

27.161

.800

324

25.263

214.13

0277

8

29.036

.800

324

22.103

168.49

0278

9

30.161

.800

324

25.080

107.65

0279

10

27.161

.575

324

35.878

199.85

0280

11

29.036

.575

324

37.479

-23.15

0281

12

30.161

.575

324

39.841

130.50

0282

1

27.161

.925

342

31.890

242.05

0283

2

29.036

.925

342

25.397

178.46

0284

3

30.161

.925

342

16.021

106.06

0285

4

27.161

.700

342

64.694

215.62

0286

5

29.036

.700

342

31.746

176.22

0287

6

30.161

.700

342

51.981

109.57

0288

7

27.161

.800

342

40.911

215.17

0289

8

29.036

.800

342

21.738

168.29

0290

9

30.161

.800

342

22.827

107.48

0291

10

27.161

.575

342

50.371

193.46

0292

11

29.036

.575

342

36.452

-23.83

0293

12

30.161

.575

342

27.900

112.28

TEMP13 T=00004 IS ON CR AA USING 00072 BLKS R=0000

0001	PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM				PAGE
0002					
0003					
0004	RUN # 73	DATE 10/5/82	MEASUREMENT LOCATION: DOWNSTREAM		
0005					
0006	CONFIGURATION: TREATMENT		FAN SPEED: 6000 rpm		
0007					
0008	TEMPERATURES (deg. F):				
0009	INLET (DRY) : 75				
0010	CHAMBER (DRY): 75				
0011	CHAMBER (WET): 64(?)				
0012					DATA REDUCTION: FROM TAPE
0013					
0014	KULITE	KULITE	POSITION	AMPLITUDE	PHASE
0015	NO.	AXIAL (in.)	RADIAL (r/r_2)	CIRCUM. (deg.)	(Voltsx10)
0016	-----	-----	-----	-----	-----
0017	-----	-----	-----	-----	-----
0018	13	56.161	.925	0	21.811 .12
0019	14	58.036	.925	0	9.143 326.79
0020	15	59.161	.925	0	6.979 212.55
0021	16	56.161	.700	0	9.982 -15.44
0022	17	58.036	.700	0	18.777 261.08
0023	18	59.161	.700	0	25.799 248.94
0024	19	56.161	.800	0	17.881 344.89
0025	20	58.036	.800	0	15.001 289.85
0026	21	59.161	.800	0	10.000 90.00
0027	22	56.161	.575	0	15.629 294.25
0028	23	58.036	.575	0	32.132 242.75
0029	24	59.161	.575	0	48.669 266.13
0030	13	56.161	.925	18	20.193 345.17
0031	14	58.036	.925	18	9.606 322.85
0032	15	59.161	.925	18	3.081 167.65
0033	16	56.161	.700	18	.100 90.00
0034	17	58.036	.700	18	17.740 245.94
0035	18	59.161	.700	18	22.493 235.39
0036	19	56.161	.800	18	11.760 -33.30
0037	20	58.036	.800	18	8.649 277.62
0038	21	59.161	.800	18	10.000 90.00
0039	22	56.161	.575	18	16.039 261.12
0040	23	58.036	.575	18	25.051 233.39
0041	24	59.161	.575	18	46.162 237.72
0042	13	56.161	.925	36	20.626 308.13
0043	14	58.036	.925	36	7.872 293.95
0044	15	59.161	.925	36	6.126 102.54
0045	16	56.161	.700	36	10.921 264.71
0046	17	58.036	.700	36	18.864 231.07
0047	18	59.161	.700	36	21.295 202.50
0048	19	56.161	.800	36	19.563 284.53
0049	20	58.036	.800	36	11.076 254.49
0050	21	59.161	.800	36	10.000 90.00
0051	22	56.161	.575	36	24.780 227.51
0052	23	58.036	.575	36	27.936 203.78
0053	24	59.161	.575	36	52.202 211.73
0054	13	56.161	.925	54	25.234 275.96
0055	14	58.036	.925	54	9.127 253.44
0056	15	59.161	.925	54	8.428 100.37
0057	16	56.161	.700	54	15.008 235.94
0058	17	58.036	.700	54	19.083 200.61

0059

0060

0061

0062

0063

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

RUN # 73

DATE 10/5/82

MEASUREMENT LOCATION: DOWNSTREAM

KULITE NO.	KULITE NO.	AXIAL (in.)	RADIAL (r/r ₂)	POSITION CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0064	18	59.161	.700	54	25.140	157.25
0065	19	56.161	.800	54	21.900	254.16
0066	20	58.036	.800	54	11.649	220.07
0067						
0068	21	59.161	.800	54	10.000	90.00
0069	22	56.161	.575	54	27.559	211.40
0070	23	58.036	.575	54	28.016	171.08
0071	24	59.161	.575	54	53.768	187.74
0072	13	56.161	.925	72	16.674	253.88
0073	14	58.036	.925	72	7.316	207.81
0074	15	59.161	.925	72	7.788	99.16
0075	16	56.161	.700	72	12.216	212.50
0076	17	58.036	.700	72	20.528	180.75
0077	18	59.161	.700	72	23.190	153.80
0078	19	56.161	.800	72	18.105	221.62
0079	20	58.036	.800	72	14.884	186.66
0080	21	59.161	.800	72	10.000	90.00
0081	22	56.161	.575	72	24.868	185.23
0082	23	58.036	.575	72	30.317	151.10
0083	24	59.161	.575	72	53.725	165.54
0084	13	56.161	.925	90	17.493	231.01
0085	14	58.036	.925	90	12.174	206.98
0086	15	59.161	.925	90	3.168	96.60
0087	16	56.161	.700	90	9.633	191.47
0088	17	58.036	.700	90	20.127	153.15
0089	18	59.161	.700	90	24.635	125.55
0090	19	56.161	.800	90	17.956	217.89
0091	20	58.036	.800	90	15.295	182.29
0092	21	59.161	.800	90	10.000	90.00
0093	22	56.161	.575	90	18.250	164.70
0094	23	58.036	.575	90	29.893	133.27
0095	24	59.161	.575	90	57.330	143.40
0096	13	56.161	.925	108	24.093	226.13
0100	14	58.036	.925	108	15.604	214.42
0101	15	59.161	.925	108	3.921	249.73
0102	16	56.161	.700	108	5.675	195.27
0103	17	58.036	.700	108	16.215	136.19
0104	18	59.161	.700	108	18.232	103.13
0105	19	56.161	.800	108	14.997	218.97
0106	20	58.036	.800	108	12.541	185.97
0107	21	59.161	.800	108	10.000	90.00
0108	22	56.161	.575	108	12.857	134.26
0109	23	58.036	.575	108	30.597	114.21
0110	24	59.161	.575	108	48.617	117.99
0111	13	56.161	.925	126	26.145	202.82
0112	14	58.036	.925	126	20.187	193.01
0113	15	59.161	.925	126	5.811	227.07
0114	16	56.161	.700	126	8.022	181.52
0115	17	58.036	.700	126	17.236	118.82
0116	18	59.161	.700	126	21.001	80.94
0117	19	56.161	.800	126	18.329	195.64
0118	20	58.036	.800	126	13.718	174.95
0119	21	59.161	.800	126	10.000	90.00

0120

0121

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

0122

0123

RUN # 73

DATE 10/5/82

MEASUREMENT LOCATION: DOWNSTREAM

0124

0125

KULITE

0126

NO.

0127

KULITE

0128

AXIAL

(in.)

POSITION

RADIAL

 (r/r_2)

CIRCUM.

(deg.)

AMPLITUDE

(Voltsx10)

PHASE

(deg.)

0129	22	56.161	.575	126	11.381	103.45
0130	23	58.036	.575	126	32.680	87.43
0131	24	59.161	.575	126	55.407	94.95
0132	13	56.161	.925	144	31.543	171.56
0133	14	58.036	.925	144	23.553	166.63
0134	15	59.161	.925	144	5.505	173.77
0135	16	56.161	.700	144	8.491	145.80
0136	17	58.036	.700	144	21.304	102.88
0137	18	59.161	.700	144	27.006	69.03
0138	19	56.161	.800	144	25.529	160.35
0139	20	58.036	.800	144	20.576	145.53
0140	21	59.161	.800	144	10.000	90.00
0141	22	56.161	.575	144	14.593	91.74
0142	23	58.036	.575	144	38.379	73.44
0143	24	59.161	.575	144	60.790	76.48
0144	13	56.161	.925	162	29.857	157.52
0145	14	58.036	.925	162	23.933	140.26
0146	15	59.161	.925	162	6.323	127.59
0147	16	56.161	.700	162	9.032	161.84
0148	17	58.036	.700	162	21.077	82.86
0149	18	59.161	.700	162	28.697	59.42
0150	19	56.161	.800	162	21.228	156.97
0151	20	58.036	.800	162	17.395	127.58
0152	21	59.161	.800	162	10.000	90.00
0153	22	56.161	.575	162	8.875	91.57
0154	23	58.036	.575	162	39.700	64.11
0155	24	59.161	.575	162	60.171	66.97
0156	13	56.161	.925	180	24.931	160.07
0157	14	58.036	.925	180	19.719	139.52
0158	15	59.161	.925	180	5.293	124.36
0159	16	56.161	.700	180	8.845	177.54
0160	17	58.036	.700	180	17.654	69.69
0161	18	59.161	.700	180	28.912	51.71
0162	19	56.161	.800	180	22.027	158.93
0163	20	58.036	.800	180	19.488	106.94
0164	21	59.161	.800	180	10.000	90.00
0165	22	56.161	.575	180	3.183	128.34
0166	23	58.036	.575	180	38.794	395.42
0167	24	59.161	.575	180	50.625	41.58
0168	13	56.161	.925	198	22.535	140.56
0169	14	58.036	.925	198	22.343	120.96
0170	15	59.161	.925	198	7.625	106.74
0171	16	56.161	.700	198	7.260	179.72
0172	17	58.036	.700	198	16.168	60.22
0173	18	59.161	.700	198	23.134	43.27
0174	19	56.161	.800	198	21.211	136.00
0175	20	58.036	.800	198	17.832	98.32
0176	21	59.161	.800	198	10.000	90.00
0177	22	56.161	.575	198	8.626	141.82
0178	23	58.036	.575	198	36.431	384.27
0179	24	59.161	.575	198	42.043	31.45
0180	13	56.161	.925	216	27.879	121.08

0181

0182

0183

0184

0185

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

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RUN # 73

DATE 10/5/82

MEASUREMENT LOCATION: DOWNSTREAM

KULITE NO.	KULITE NO.	POSITION AXIAL (in.)	POSITION RADIAL (r/r ₂)	POSITION CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0186	14	58.036	.925	216	22.274	105.70
0187	15	59.161	.925	216	5.588	96.99
0188	16	56.161	.700	216	11.543	158.53
0189	17	58.036	.700	216	14.693	51.28
0190	18	59.161	.700	216	27.689	31.16
0191	19	56.161	.800	216	25.332	121.26
0192	20	58.036	.800	216	17.641	87.67
0193	21	59.161	.800	216	10.000	90.00
0194	22	56.161	.575	216	12.005	122.02
0195	23	58.036	.575	216	34.110	11.06
0196	24	59.161	.575	216	42.556	21.19
0200	13	56.161	.925	234	21.619	89.87
0201	14	58.036	.925	234	17.731	80.61
0202	15	59.161	.925	234	5.863	392.05
0204	16	56.161	.700	234	13.170	114.93
0205	17	58.036	.700	234	16.708	25.06
0206	18	59.161	.700	234	25.234	-.20
0207	19	56.161	.800	234	20.310	97.03
0208	20	58.036	.800	234	15.589	54.88
0209	21	59.161	.800	234	10.000	90.00
0210	22	56.161	.575	234	14.419	96.99
0211	23	58.036	.575	234	32.601	352.74
0212	24	59.161	.575	234	38.574	4.01
0213	13	56.161	.925	252	14.013	53.23
0214	14	58.036	.925	252	12.365	40.65
0215	15	59.161	.925	252	3.791	342.57
0216	16	56.161	.700	252	11.264	90.97
0217	17	58.036	.700	252	16.159	362.68
0218	18	59.161	.700	252	23.805	335.27
0219	19	56.161	.800	252	14.682	61.57
0220	20	58.036	.800	252	13.225	26.94
0221	21	59.161	.800	252	10.000	90.00
0222	22	56.161	.575	252	10.579	76.40
0223	23	58.036	.575	252	28.866	341.86
0224	24	59.161	.575	252	40.762	-11.70
0225	13	56.161	.925	270	14.850	47.26
0226	14	58.036	.925	270	14.435	35.43
0227	15	59.161	.925	270	4.075	298.11
0228	16	56.161	.700	270	11.598	76.57
0229	17	58.036	.700	270	18.062	352.91
0230	18	59.161	.700	270	26.540	329.61
0231	19	56.161	.800	270	15.879	49.47
0232	20	58.036	.800	270	15.292	374.78
0233	21	59.161	.800	270	10.000	90.00
0234	22	56.161	.575	270	15.245	48.84
0235	23	58.036	.575	270	30.439	-32.71
0236	24	59.161	.575	270	43.918	-15.13
0237	13	56.161	.925	288	17.087	76.94
0238	14	58.036	.925	288	11.128	50.72
0239	15	59.161	.925	288	3.018	-27.78
0240	16	56.161	.700	288	12.770	74.91
0241	17	58.036	.700	288	14.427	359.50

0242

0243

0244

0245

0246

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

RUN # 73 DATE 10/5/82 MEASUREMENT LOCATION: DOWNSTREAM

KULITE NO.	KULITE NO.	AXIAL (in.)	RADIAL (r/r_2)	POSITION (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0250						
0251	18	59.161	.700	288	20.176	-30.08
0252	19	56.161	.800	288	18.451	54.84
0253	20	58.036	.800	288	14.216	22.33
0254	21	59.161	.800	288	10.000	90.00
0255	22	56.161	.575	288	18.159	40.74
0256	23	58.036	.575	288	25.627	311.99
0257	24	59.161	.575	288	40.168	-22.89
0258	13	56.161	.925	306	14.748	60.63
0259	14	58.036	.925	306	12.484	42.89
0260	15	59.161	.925	306	1.375	29.41
0261	16	56.161	.700	306	14.845	55.42
0262	17	58.036	.700	306	13.616	352.52
0263	18	59.161	.700	306	15.603	314.08
0264	19	56.161	.800	306	17.740	49.29
0265	20	58.036	.800	306	13.879	372.02
0266	21	59.161	.800	306	10.000	90.00
0267	22	56.161	.575	306	14.737	14.77
0268	23	58.036	.575	306	23.548	305.22
0269	24	59.161	.575	306	38.096	320.90
0270	13	56.161	.925	324	13.648	10.30
0271	14	58.036	.925	324	10.025	357.75
0272	15	59.161	.925	324	3.664	212.73
0273	16	56.161	.700	324	16.367	20.28
0274	17	58.036	.700	324	17.765	323.48
0275	18	59.161	.700	324	21.052	281.69
0276	19	56.161	.800	324	16.954	3.36
0277	20	58.036	.800	324	14.840	334.92
0278	21	59.161	.800	324	10.000	90.00
0279	22	56.161	.575	324	17.772	334.67
0280	23	58.036	.575	324	24.836	285.82
0281	24	59.161	.575	324	46.313	-57.04
0282	13	56.161	.925	342	20.185	-7.12
0283	14	58.036	.925	342	12.573	327.89
0284	15	59.161	.925	342	7.856	237.84
0285	16	56.161	.700	342	13.316	350.34
0286	17	58.036	.700	342	17.591	300.80
0287	18	59.161	.700	342	23.468	272.99
0288	19	56.161	.800	342	20.170	334.60
0289	20	58.036	.800	342	15.778	304.03
0290	21	59.161	.800	342	10.000	90.00
0291	22	56.161	.575	342	21.582	320.20
0292	23	58.036	.575	342	28.511	260.64
0293	24	59.161	.575	342	47.272	274.92

TEMP13 T=00004 IS ON CR AA USING 00072 BLKS R=0000

0001
 0002 PHASE AND MAGNITUDE DATA - NASA AFI DUCT PROGRAM PAGE
 0003
 0004 RUN # 75 DATE 10/7/82 MEASUREMENT LOCATION: UPSTREAM
 0005
 0006 CONFIGURATION: TREATMENT FAN SPEED: 4000 rpm
 0007
 0008 TEMPERATURES (deg. F):
 0009 INLET (DRY) : 80
 0010 CHAMBER (DRY) : 80
 0011 CHAMBER (WET) : 74

0012
 0013 DATA REDUCTION: ON-LINE

KULITE NO.	KULITE AXIAL (in.)	POSITION (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
1	27.161	.925	0	6.901	65.08
2	29.036	.925	0	10.160	33.91
3	30.161	.925	0	8.958	34.60
4	27.161	.700	0	13.371	75.90
5	29.036	.700	0	9.420	50.46
6	30.161	.700	0	10.218	34.61
7	27.161	.800	0	15.516	76.13
8	29.036	.800	0	7.283	58.25
9	30.161	.800	0	10.009	28.30
10	27.161	.575	0	12.324	79.98
11	29.036	.575	0	8.795	254.18
12	30.161	.575	0	9.345	34.51
1	27.161	.925	18	13.125	32.03
2	29.036	.925	18	13.133	31.01
3	30.161	.925	18	9.935	6.59
4	27.161	.700	18	11.442	72.75
5	29.036	.700	18	10.183	27.59
6	30.161	.700	18	8.978	23.30
7	27.161	.800	18	11.953	51.96
8	29.036	.800	18	11.468	30.15
9	30.161	.800	18	9.341	27.98
10	27.161	.575	18	10.532	56.78
11	29.036	.575	18	8.017	242.74
12	30.161	.575	18	9.677	24.90
1	27.161	.925	36	7.402	39.92
2	29.036	.925	36	8.187	18.63
3	30.161	.925	36	9.368	2.77
4	27.161	.700	36	6.454	67.57
5	29.036	.700	36	9.679	7.81
6	30.161	.700	36	7.839	45.08
7	27.161	.800	36	9.575	19.59
8	29.036	.800	36	12.100	12.72
9	30.161	.800	36	6.975	-3.17
10	27.161	.575	36	6.638	52.68
11	29.036	.575	36	8.125	222.35
12	30.161	.575	36	8.515	363.74
1	27.161	.925	54	5.186	358.97
2	29.036	.925	54	8.420	338.99
3	30.161	.925	54	6.546	335.70
4	27.161	.700	54	7.449	23.47
5	29.036	.700	54	8.282	-4.44

0059
 0060 PHASE AND MAGNITUDE DATA - NASA AFI DUCT PROGRAM PAGE
 0061
 0062 RUN # 75 DATE 10/7/82 MEASUREMENT LOCATION: UPSTREAM
 0063
 0064 KULITE KULITE POSITION AMPLITUDE PHASE
 0065 NO. AXIAL RADIAL CIRCUM. (Voltsx10) (deg.)
 0066 (in.) (r/r_2) (deg.)
 0067
 0068 6 30.161 .700 54 5.669 -11.44
 0069 7 27.161 .800 54 9.622 17.39
 0070 8 29.036 .800 54 7.791 -1.49
 0071 9 30.161 .800 54 7.325 -22.40
 0072 10 27.161 .575 54 8.213 32.03
 0073 11 29.036 .575 54 3.914 217.34
 0074 12 30.161 .575 54 9.591 338.62
 0075 1 27.161 .925 72 8.211 337.50
 0076 2 29.036 .925 72 8.667 318.84
 0077 3 30.161 .925 72 7.064 300.73
 0078 4 27.161 .700 72 8.753 313.37
 0079 5 29.036 .700 72 10.206 328.43
 0080 6 30.161 .700 72 4.417 257.48
 0081 7 27.161 .800 72 8.138 -16.63
 0082 8 29.036 .800 72 8.990 -31.46
 0083 9 30.161 .800 72 6.559 -51.80
 0084 10 27.161 .575 72 6.403 -25.96
 0085 11 29.036 .575 72 7.216 166.40
 0086 12 30.161 .575 72 4.559 304.90
 0087 1 27.161 .925 90 5.284 238.54
 0088 2 29.036 .925 90 10.616 275.67
 0089 3 30.161 .925 90 5.066 287.04
 0090 4 27.161 .700 90 9.029 334.54
 0091 5 29.036 .700 90 3.773 313.50
 0092 6 30.161 .700 90 11.016 291.25
 0093 7 27.161 .800 90 13.146 320.08
 0094 8 29.036 .800 90 6.078 321.15
 0095 9 30.161 .800 90 10.653 265.03
 0096 10 27.161 .575 90 8.233 318.14
 0097 11 29.036 .575 90 7.387 150.33
 0098 12 30.161 .575 90 5.873 273.48
 0099 1 27.161 .925 108 4.919 284.52
 0100 2 29.036 .925 108 7.502 263.28
 0101 3 30.161 .925 108 8.321 264.05
 0102 4 27.161 .700 108 7.988 306.27
 0103 5 29.036 .700 108 6.991 277.43
 0104 6 30.161 .700 108 7.001 261.19
 0105 7 27.161 .800 108 8.651 296.31
 0106 8 29.036 .800 108 6.496 274.58
 0107 9 30.161 .800 108 7.083 257.22
 0108 10 27.161 .575 108 6.699 291.07
 0109 11 29.036 .575 108 8.036 131.55
 0110 12 30.161 .575 108 7.854 260.53
 0111 1 27.161 .925 126 6.422 283.28
 0112 2 29.036 .925 126 8.209 261.78
 0113 3 30.161 .925 126 8.781 251.79
 0114 4 27.161 .700 126 11.139 288.29
 0115 5 29.036 .700 126 6.341 292.93
 0116 6 30.161 .700 126 11.368 245.51
 0117 7 27.161 .800 126 8.886 263.01
 0118 8 29.036 .800 126 9.944 262.52
 0119 9 30.161 .800 126 7.119 230.69

0120

0121

PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

0122

0123

RUN # 75

DATE 10/7/82

MEASUREMENT LOCATION: UPSTREAM

0124

0125

KULITE NO.	KULITE NO.	POSITION (r/r ₂)	AMPLITUDE (Voltsx10)	PHASE (deg.)		
		AXIAL (in.)	RADIAL (r/r ₂)	CIRCUM. (deg.)		
0129	10	27.161	.575	126	6.186	282.55
0130	11	29.036	.575	126	8.887	110.68
0131	12	30.161	.575	126	6.587	232.11
0132	1	27.161	.925	144	2.130	256.74
0133	2	29.036	.925	144	7.682	234.23
0134	3	30.161	.925	144	7.198	224.81
0135	4	27.161	.700	144	8.550	280.98
0136	5	29.036	.700	144	6.804	254.83
0137	6	30.161	.700	144	7.536	231.16
0138	7	27.161	.800	144	7.790	274.95
0139	8	29.036	.800	144	7.441	248.49
0140	9	30.161	.800	144	8.162	232.00
0141	10	27.161	.575	144	6.608	275.27
0142	11	29.036	.575	144	8.994	95.95
0143	12	30.161	.575	144	9.255	231.33
0144	1	27.161	.925	162	6.761	259.39
0145	2	29.036	.925	162	7.728	226.98
0146	3	30.161	.925	162	9.298	222.37
0147	4	27.161	.700	162	10.247	284.56
0148	5	29.036	.700	162	7.766	243.57
0149	6	30.161	.700	162	9.782	214.80
0150	7	27.161	.800	162	8.190	261.92
0151	8	29.036	.800	162	9.834	240.04
0152	9	30.161	.800	162	8.559	224.76
0153	10	27.161	.575	162	9.420	266.82
0154	11	29.036	.575	162	9.961	87.15
0155	12	30.161	.575	162	8.525	214.86
0156	1	27.161	.925	180	6.258	244.20
0157	2	29.036	.925	180	11.996	229.61
0158	3	30.161	.925	180	6.337	207.40
0159	4	27.161	.700	180	11.765	297.80
0160	5	29.036	.700	180	5.616	215.95
0161	6	30.161	.700	180	9.491	225.59
0162	7	27.161	.800	180	10.664	248.04
0163	8	29.036	.800	180	12.468	232.27
0164	9	30.161	.800	180	8.603	213.19
0165	10	27.161	.575	180	6.476	255.95
0166	11	29.036	.575	180	11.616	68.07
0167	12	30.161	.575	180	7.304	198.16
0168	1	27.161	.925	198	12.611	246.75
0169	2	29.036	.925	198	12.660	226.94
0170	3	30.161	.925	198	10.551	216.72
0171	4	27.161	.700	198	10.135	267.52
0172	5	29.036	.700	198	10.688	221.61
0173	6	30.161	.700	198	10.859	209.64
0174	7	27.161	.800	198	13.868	253.19
0175	8	29.036	.800	198	10.951	228.91
0176	9	30.161	.800	198	11.744	207.45
0177	10	27.161	.575	198	10.164	260.03
0178	11	29.036	.575	198	9.486	72.62
0179	12	30.161	.575	198	11.470	125.34
0180	1	27.161	.925	216	7.539	231.32

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PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM

PAGE

RUN # 75 DATE 10/7/82 MEASUREMENT LOCATION: UPSTREAM

0186	KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r_2)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0187						
0188						
0189						
0190	2	29.036	.925	216	11.099	209.11
0191	3	30.161	.925	216	11.327	200.89
0192	4	27.161	.700	216	12.206	265.91
0193	5	29.036	.700	216	7.186	187.82
0194	6	30.161	.700	216	13.271	210.96
0195	7	27.161	.800	216	13.959	209.79
0196	8	29.036	.800	216	14.231	219.24
0197	9	30.161	.800	216	10.429	179.33
0198	10	27.161	.575	216	10.121	237.98
0199	11	29.036	.575	216	11.186	70.64
0200	12	30.161	.575	216	11.204	189.30
0201	1	27.161	.925	234	13.647	222.14
0202	2	29.036	.925	234	13.749	204.04
0203	3	30.161	.925	234	10.086	181.25
0204	4	27.161	.700	234	11.487	237.60
0205	5	29.036	.700	234	11.241	197.46
0206	6	30.161	.700	234	10.384	181.60
0207	7	27.161	.800	234	11.021	228.36
0208	8	29.036	.800	234	11.716	197.85
0209	9	30.161	.800	234	10.282	186.61
0210	10	27.161	.575	234	9.298	233.20
0211	11	29.036	.575	234	10.051	38.43
0212	12	30.161	.575	234	8.915	185.73
0213	1	27.161	.925	252	8.522	203.71
0214	2	29.036	.925	252	12.362	175.79
0215	3	30.161	.925	252	9.275	166.71
0216	4	27.161	.700	252	13.219	208.28
0217	5	29.036	.700	252	13.468	199.82
0218	6	30.161	.700	252	11.720	147.90
0219	7	27.161	.800	252	15.325	212.25
0220	8	29.036	.800	252	10.578	181.57
0221	9	30.161	.800	252	11.224	162.64
0222	10	27.161	.575	252	8.373	194.43
0223	11	29.036	.575	252	11.535	378.01
0224	12	30.161	.575	252	8.670	160.01
0225	1	27.161	.925	270	6.693	155.86
0226	2	29.036	.925	270	11.744	133.82
0227	3	30.161	.925	270	10.300	147.95
0228	4	27.161	.700	270	16.229	199.45
0229	5	29.036	.700	270	9.064	169.93
0230	6	30.161	.700	270	12.063	136.34
0231	7	27.161	.800	270	8.553	152.11
0232	8	29.036	.800	270	11.704	142.32
0233	9	30.161	.800	270	7.734	134.06
0234	10	27.161	.575	270	7.963	197.18
0235	11	29.036	.575	270	11.755	335.63
0236	12	30.161	.575	270	8.299	162.73
0237	1	27.161	.925	288	12.924	126.53
0238	2	29.036	.925	288	12.990	133.61
0239	3	30.161	.925	288	12.411	127.52
0240	4	27.161	.700	288	11.076	170.61
0241	5	29.036	.700	288	10.984	130.04

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 0243 PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM PAGE
 0244
 0245 RUN # 75 DATE 10/7/82 MEASUREMENT LOCATION: UPSTREAM
 0246
 0247 KULITE KULITE POSITION AMPLITUDE PHASE
 0248 NO. AXIAL RADIAL CIRCUM. (Voltsx10) (deg.)
 0249 (in.) (r/r_2) (deg.)
 0250
 0251 6 30.161 .700 288 9.164 118.24
 0252 7 27.161 .800 288 12.083 154.07
 0253 8 29.036 .800 288 11.981 132.60
 0254 9 30.161 .800 288 11.121 115.00
 0255 10 27.161 .575 288 8.297 166.83
 0256 11 29.036 .575 288 10.579 340.93
 0257 12 30.161 .575 288 9.164 125.55
 0258 1 27.161 .925 306 7.814 129.29
 0259 2 29.036 .925 306 10.451 114.46
 0260 3 30.161 .925 306 9.677 96.78
 0261 4 27.161 .700 306 10.528 158.81
 0262 5 29.036 .700 306 6.611 129.68
 0263 6 30.161 .700 306 11.019 103.73
 0264 7 27.161 .800 306 9.000 119.84
 0265 8 29.036 .800 306 12.301 112.15
 0266 9 30.161 .800 306 6.561 96.71
 0267 10 27.161 .575 306 9.230 136.10
 0268 11 29.036 .575 306 10.447 293.84
 0269 12 30.161 .575 306 8.662 126.01
 0270 1 27.161 .925 324 7.613 117.43
 0271 2 29.036 .925 324 10.701 73.15
 0272 3 30.161 .925 324 10.347 84.73
 0273 4 27.161 .700 324 11.503 119.51
 0274 5 29.036 .700 324 10.057 95.19
 0275 6 30.161 .700 324 9.261 79.91
 0276 7 27.161 .800 324 11.951 105.75
 0277 8 29.036 .800 324 9.128 94.77
 0278 9 30.161 .800 324 7.607 74.80
 0279 10 27.161 .575 324 7.838 127.34
 0280 11 29.036 .575 324 8.942 274.42
 0281 12 30.161 .575 324 7.194 99.65
 0282 1 27.161 .925 342 7.650 87.38
 0283 2 29.036 .925 342 8.108 61.56
 0284 3 30.161 .925 342 11.706 51.01
 0285 4 27.161 .700 342 13.978 96.50
 0286 5 29.036 .700 342 9.676 85.19
 0287 6 30.161 .700 342 11.607 46.23
 0288 7 27.161 .800 342 11.263 102.02
 0289 8 29.036 .800 342 9.209 76.88
 0290 9 30.161 .800 342 9.982 70.59
 0291 10 27.161 .575 342 10.291 100.50
 0292 11 29.036 .575 342 9.011 276.15
 0293 12 30.161 .575 342 9.804 41.51

TEMP13 T=00004 IS ON CR AA USING 00072 BLKS R=0000

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 0002 PHASE AND MAGNITUDE DATA - NASA AFT DUCT PROGRAM PAGE
 0003
 0004 RUN # 75 DATE 10/7/82 MEASUREMENT LOCATION: DOWNSTREAM .
 0005
 0006 CONFIGURATION: TREATMENT FAN SPEED: 4000 rpm
 0007
 0008 TEMPERATURES (deg. F):
 0009 INLET (DRY) : 80
 0010 CHAMBER (DRY) : 80
 0011 CHAMBER (WET) : 74
 0012 DATA REDUCTION: ON-LINE
 0013
 0014 KULITE KULITE POSITION AMPLITUDE PHASE
 0015 NO. AXIAL RADIAL CIRCUM. (Voltsx10) (deg.)
 0016 (in.) (r/r_2) (deg.)
 0017
 0018 13 56.161 .925 0 5.729 122.07
 0019 14 58.036 .925 0 1.717 157.71
 0020 15 59.161 .925 0 6.773 107.13
 0021 16 56.161 .700 0 6.110 120.39
 0022 17 58.036 .700 0 8.692 173.57
 0023 18 59.161 .700 0 8.194 106.83
 0024 19 56.161 .800 0 5.896 174.85
 0025 20 58.036 .800 0 6.951 117.49
 0026 21 59.161 .800 0 10.000 90.00
 0027 22 56.161 .575 0 6.051 175.58
 0028 23 58.036 .575 0 7.897 99.46
 0029 24 59.161 .575 0 5.204 119.03
 0030 13 56.161 .925 18 6.143 105.92
 0031 14 58.036 .925 18 1.651 149.37
 0032 15 59.161 .925 18 7.151 96.67
 0033 16 56.161 .700 18 7.736 105.40
 0034 17 58.036 .700 18 9.649 143.34
 0035 18 59.161 .700 18 9.329 89.98
 0036 19 56.161 .800 18 5.898 137.41
 0037 20 58.036 .800 18 8.464 105.04
 0038 21 59.161 .800 18 10.000 90.00
 0039 22 56.161 .575 18 6.115 149.15
 0040 23 58.036 .575 18 7.863 89.42
 0041 24 59.161 .575 18 6.026 101.16
 0042 13 56.161 .925 36 6.081 86.51
 0043 14 58.036 .925 36 1.501 121.01
 0044 15 59.161 .925 36 7.050 78.46
 0045 16 56.161 .700 36 7.037 88.10
 0046 17 58.036 .700 36 9.248 123.35
 0047 18 59.161 .700 36 8.836 73.89
 0048 19 56.161 .800 36 5.796 121.04
 0049 20 58.036 .800 36 8.662 79.15
 0050 21 59.161 .800 36 10.000 90.00
 0051 22 56.161 .575 36 5.664 125.47
 0052 23 58.036 .575 36 8.455 77.46
 0053 24 59.161 .575 36 5.959 75.04
 0054 13 56.161 .925 54 4.941 68.51
 0055 14 58.036 .925 54 1.428 97.07
 0056 15 59.161 .925 54 6.311 55.76
 0057 16 56.161 .700 54 5.968 64.40
 0058 17 58.036 .700 54 7.762 105.22

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RUN # 75

DATE 10/7/82

MEASUREMENT LOCATION: DOWNSTREAM

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KULITE NO.	KULITE NO.	POSITION AXIAL (in.)	POSITION RADIAL (r/r ₂)	POSITION CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0068	18	59.161	.700	54	7.706	54.10
0069	19	56.161	.800	54	5.636	93.52
0070	20	58.036	.800	54	7.602	65.84
0071	21	59.161	.800	54	10.000	90.00
0072	22	56.161	.575	54	5.503	106.76
0073	23	58.036	.575	54	7.278	49.31
0074	24	59.161	.575	54	5.261	55.07
0075	13	56.161	.925	72	4.724	32.03
0076	14	58.036	.925	72	1.071	82.09
0077	15	59.161	.925	72	4.867	24.44
0078	16	56.161	.700	72	5.653	30.34
0079	17	58.036	.700	72	6.981	73.44
0080	18	59.161	.700	72	7.689	19.44
0081	19	56.161	.800	72	4.584	69.90
0082	20	58.036	.800	72	6.487	29.54
0083	21	59.161	.800	72	10.000	90.00
0084	22	56.161	.575	72	4.627	78.60
0085	23	58.036	.575	72	6.519	17.34
0086	24	59.161	.575	72	5.147	26.44
0087	13	56.161	.925	90	4.972	-1.29
0088	14	58.036	.925	90	.854	25.31
0089	15	59.161	.925	90	6.443	-14.66
0090	16	56.161	.700	90	5.975	-6.95
0091	17	58.036	.700	90	6.163	46.50
0092	18	59.161	.700	90	7.698	-13.56
0093	19	56.161	.800	90	3.776	27.20
0094	20	58.036	.800	90	6.928	-5.84
0095	21	59.161	.800	90	10.000	90.00
0096	22	56.161	.575	90	4.709	35.46
0097	23	58.036	.575	90	7.013	-18.57
0098	24	59.161	.575	90	5.738	-12.03
0099	13	56.161	.925	108	5.748	-35.49
0100	14	58.036	.925	108	.787	-17.04
0101	15	59.161	.925	108	7.438	-35.42
0102	16	56.161	.700	108	6.311	54.56
0103	17	58.036	.700	108	7.239	359.53
0104	18	59.161	.700	108	8.972	317.21
0105	19	56.161	.800	108	4.211	177.32
0106	20	58.036	.800	108	7.286	-39.11
0107	21	59.161	.800	108	10.000	90.00
0108	22	56.161	.575	108	4.149	11.64
0109	23	58.036	.575	108	7.870	-41.19
0110	24	59.161	.575	108	5.388	-38.90
0111	13	56.161	.925	126	6.306	-48.61
0112	14	58.036	.925	126	1.118	-20.61
0113	15	59.161	.925	126	7.539	299.64
0114	16	56.161	.700	126	7.089	309.86
0115	17	58.036	.700	126	7.699	358.57
0116	18	59.161	.700	126	8.715	298.72
0117	19	56.161	.800	126	5.109	-9.43
0118	20	58.036	.800	126	7.919	-53.41
0119	21	59.161	.800	126	10.000	90.00

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RUN # 75 DATE 10/7/82 MEASUREMENT LOCATION: DOWNSTREAM

KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0129	22	56.161	.575	126	4.908
0130	23	58.036	.575	126	7.473
0131	24	59.161	.575	126	5.834
0132	13	56.161	.925	144	5.366
0133	14	58.036	.925	144	1.148
0134	15	59.161	.925	144	7.984
0135	16	56.161	.700	144	6.721
0136	17	58.036	.700	144	8.051
0137	18	59.161	.700	144	8.837
0138	19	56.161	.800	144	5.236
0139	20	58.036	.800	144	7.898
0140	21	59.161	.800	144	10.000
0141	22	56.161	.575	144	5.366
0142	23	58.036	.575	144	7.943
0143	24	59.161	.575	144	5.259
0144	13	56.161	.925	162	5.801
0145	14	58.036	.925	162	1.134
0146	15	59.161	.925	162	8.244
0147	16	56.161	.700	162	6.214
0148	17	58.036	.700	162	7.403
0149	18	59.161	.700	162	8.831
0150	19	56.161	.800	162	5.099
0151	20	58.036	.800	162	7.738
0152	21	59.161	.800	162	10.000
0153	22	56.161	.575	162	4.873
0154	23	58.036	.575	162	8.679
0155	24	59.161	.575	162	5.834
0156	13	56.161	.925	180	5.931
0157	14	58.036	.925	180	.913
0158	15	59.161	.925	180	7.406
0159	16	56.161	.700	180	6.418
0160	17	58.036	.700	180	6.597
0161	18	59.161	.700	180	9.196
0162	19	56.161	.800	180	4.429
0163	20	58.036	.800	180	7.134
0164	21	59.161	.800	180	10.000
0165	22	56.161	.575	180	4.789
0166	23	58.036	.575	180	8.862
0167	24	59.161	.575	180	5.491
0168	13	56.161	.925	198	5.591
0169	14	58.036	.925	198	.874
0170	15	59.161	.925	198	7.228
0171	16	56.161	.700	198	6.109
0172	17	58.036	.700	198	6.816
0173	18	59.161	.700	198	9.054
0174	19	56.161	.800	198	4.728
0175	20	58.036	.800	198	7.365
0176	21	59.161	.800	198	10.000
0177	22	56.161	.575	198	5.108
0178	23	58.036	.575	198	8.661
0179	24	59.161	.575	198	5.633
0180	13	56.161	.925	216	5.944

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RUN # 75 DATE 10/7/82 MEASUREMENT LOCATION: DOWNSTREAM

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KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
14	58.036	.925	216	1.091	284.33
15	59.161	.925	216	6.156	310.61
16	56.161	.700	216	5.898	146.59
17	58.036	.700	216	6.804	297.67
18	59.161	.700	216	8.775	222.78
19	56.161	.800	216	4.600	-76.49
20	58.036	.800	216	7.408	236.06
21	59.161	.800	216	10.000	90.00
22	56.161	.575	216	5.150	302.70
23	58.036	.575	216	7.786	228.35
24	59.161	.575	216	5.561	229.71
13	56.161	.925	234	4.622	229.52
14	58.036	.925	234	.994	283.27
15	59.161	.925	234	6.118	213.05
16	56.161	.700	234	5.361	146.20
17	58.036	.700	234	6.539	295.09
18	59.161	.700	234	7.654	213.90
19	56.161	.800	234	4.677	292.50
20	58.036	.800	234	5.931	227.43
21	59.161	.800	234	10.000	90.00
22	56.161	.575	234	4.913	295.03
23	58.036	.575	234	7.019	216.30
24	59.161	.575	234	4.977	216.43
13	56.161	.925	252	4.034	213.61
14	58.036	.925	252	1.029	281.49
15	59.161	.925	252	4.804	201.93
16	56.161	.700	252	3.867	315.85
17	58.036	.700	252	7.093	296.08
18	59.161	.700	252	6.413	194.11
19	56.161	.800	252	4.586	-65.49
20	58.036	.800	252	4.874	213.91
21	59.161	.800	252	10.000	90.00
22	56.161	.575	252	4.783	293.64
23	58.036	.575	252	5.934	198.09
24	59.161	.575	252	3.850	209.34
13	56.161	.925	270	3.078	196.76
14	58.036	.925	270	.878	266.75
15	59.161	.925	270	4.213	187.51
16	56.161	.700	270	3.225	210.54
17	58.036	.700	270	7.392	281.12
18	59.161	.700	270	5.564	187.06
19	56.161	.800	270	4.488	-74.92
20	58.036	.800	270	4.214	201.12
21	59.161	.800	270	10.000	90.00
22	56.161	.575	270	4.763	278.27
23	58.036	.575	270	5.334	181.25
24	59.161	.575	270	3.916	187.68
13	56.161	.925	288	3.858	195.11
14	58.036	.925	288	.977	254.01
15	59.161	.925	288	3.891	172.00
16	56.161	.700	288	3.897	202.38
17	58.036	.700	288	6.437	263.27

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RUN # 75 DATE 10/7/82 MEASUREMENT LOCATION: DOWNSTREAM

0247	KULITE NO.	KULITE AXIAL (in.)	POSITION RADIAL (r/r ₂)	CIRCUM. (deg.)	AMPLITUDE (Voltsx10)	PHASE (deg.)
0250	18	59.161	.700	288	5.684	172.63
0251	19	56.161	.800	288	3.903	256.40
0252	20	58.036	.800	288	5.202	188.57
0253	21	59.161	.800	288	10.000	90.00
0254	22	56.161	.575	288	4.752	255.67
0255	23	58.036	.575	288	5.846	158.35
0256	24	59.161	.575	288	3.287	188.10
0257	13	56.161	.925	306	3.660	176.27
0258	14	58.036	.925	306	1.131	239.16
0259	15	59.161	.925	306	4.568	167.11
0260	16	56.161	.700	306	4.472	186.70
0261	17	58.036	.700	306	7.328	241.23
0262	18	59.161	.700	306	5.984	157.91
0263	19	56.161	.800	306	4.741	236.48
0264	20	58.036	.800	306	5.309	179.28
0265	21	59.161	.800	306	10.000	90.00
0266	22	56.161	.575	306	5.167	240.83
0267	23	58.036	.575	306	5.572	160.10
0268	24	59.161	.575	306	2.968	164.28
0269	13	56.161	.925	324	4.512	152.10
0270	14	58.036	.925	324	1.154	208.76
0271	15	59.161	.925	324	5.247	148.50
0272	16	56.161	.700	324	4.977	168.45
0273	17	58.036	.700	324	8.284	215.86
0274	18	59.161	.700	324	6.380	143.09
0275	19	56.161	.800	324	5.489	216.12
0276	20	58.036	.800	324	5.408	164.63
0277	21	59.161	.800	324	10.000	90.00
0278	22	56.161	.575	324	5.581	223.94
0279	23	58.036	.575	324	6.424	137.38
0280	24	59.161	.575	324	3.827	149.41
0281	13	56.161	.925	342	4.901	131.23
0282	14	58.036	.925	342	1.267	187.14
0283	15	59.161	.925	342	6.215	129.07
0284	16	56.161	.700	342	5.067	144.45
0285	17	58.036	.700	342	8.462	195.19
0286	18	59.161	.700	342	7.131	123.90
0287	19	56.161	.800	342	5.599	197.55
0288	20	58.036	.800	342	5.451	136.45
0289	21	59.161	.800	342	10.000	90.00
0290	22	56.161	.575	342	5.818	201.06
0291	23	58.036	.575	342	7.218	118.49
0292	24	59.161	.575	342	4.642	131.46